

# **Report on the sanitary administration of the Punjab and proceedings of the Sanitary Board for the year ... and the report on sanitary works for.**

## **Contributors**

Punjab (India). Sanitary Board.

## **Publication/Creation**

Lahore : Government Printing, [1919]

## **Persistent URL**

<https://wellcomecollection.org/works/fx27bqe6>

## **License and attribution**

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

## SANITARY DEPARTMENT.

### Memo. of Errata in the Annual Sanitary Report of the Punjab for 1919.

1. On page 3, paragraph 9, line 4, *substitute* "51.3" *for* "49.2" and "Karnal" *for* "Rohtak".
2. On page 4, paragraph 16, line 7, *for* "31.32" *read* "31.22."
3. On page 4, paragraph 17, line 6, *for* "36.2" *read* "36.22."
4. On page 5, paragraph 18, line 12, *for* "14" and "Rs. 21-12-0" *read* "28" and Rs. "31-15-0".
5. On page 5, paragraph 18, line 17, *for* "218" *read* "408."
6. On page 6, paragraph 22, line 2, *for* "8, 61" *read* "8,561."
7. On page 7, paragraph 22, line 19 *for* "8,554" *read* "8,561"
8. On page 9, in the comparative statement of plague against the years 1911, 1915, in column 4 *for* "29,13 and 2879" *read* "29,463" and "28,879."
9. On page 12, paragraph 27, line 6, *for* "feble" *read* "febrile."
10. In the statement attached to appendix B, page VII, against Sargodha, column 4, *for* "190,395" *read* "130,395."
11. Annual form No. I, against Karnal in sub-column 4, *for* "36,089" *read* "262,089."
12. Annual form No. I, against Ludhiana in sub-column 4, *for* "223,61" *read* "223,661."
13. Annual form No. I, against Gurdaspur in sub-column 6, *for* "17,21" *read* "17,321."
14. Annual form No. I, against Gujranwala in sub-column 9, *for* "2.26" *read* "22.6."
15. Annual form No. II, against Jullundur in sub-column 15, *for* "106.6" *read* "106.7."
16. Annual form No. II, against Dera Ghazi Khan in sub-column 11, *for* "35.52" *read* "25.5."
17. Annual form No. IV, Hissar, against Respiratory diseases, sub-column 8, *for* "9" *read* "8."
18. Annual form No. IV, Ambala, against Injuries, sub-column 17, *for* "1" *read* "17."
19. Annual form No. IV, Ludhiana, against fevers, sub-column 11, *for* "39" *read* "309."
20. Annual form No. IV, Lahore, against Respiratory diseases, sub-column 25, *for* "104" *read* "1,074."
21. Annual form No. IV, Amritsar, against Respiratory diseases, sub-column 5, *for* "400" *read* "409."
22. Annual form No. IV, Amritsar, against Fevers, sub-column 8, *for* "193" *read* "1,961."
23. Annual form No. IV, Sialkot, against Dysentery and Diarrhoea, sub-column 15, *for* "1" *read* "16."
24. Annual form No. IV, Ratio per 1,000 for the Province against total, sub-column 28, *for* "18.5" *read* "18.05."
25. Annual form No. V, against Kangra sub-column 14, *for* "22.31" *read* "32.31."

26. Annual form No. V, against Ferozepore sub-column 14, for "35.29" read "25.29."

27. Annual form No. V, against Rawalpindi sub-column 17, for "2.71" read "27.71."

28. Annual form No. VI-B, Towns, Karnal district, Kaithal town sub-column 5, for "2" read "22."

29. Annual form No. VI-B, Towns, Sialkot district, against Bhopalwala town sub-column 23, for "1.0" read "1.80."

30. Annual form No. VI-B, Towns, Mianwali district, against Bhakkar, town sub-column 16, for "7" read "57."

31. Annual form No. VI-B, Towns, Total for the Province sub-column 3 for "9,337,146" read "19,337,146."

32. Annual form No. VII, against Rawalpindi sub-column 23, for "11.13" read "1.13."

33. Annual form No. VIII, against Gujranwala sub-column 10, for "9" read "39."

34. Annual form No. VIII, against total for the Province sub-column 20, for "7.62" read "7,262."

35. Annual form No. IX, against Jullundur sub-column 10, for "8.2" read "862."

36. Annual form No. X, against Hissar sub-column 17, for "1" read "18".

37. Annual form No. XI, against Dera Ghazi Khan sub-column 12, for "111" read "11."

38. Statement No. I, against total British districts sub-column 28, for "11,809" read "11,089."



## Punjab Sanitary Report for 1919.



## Revised List of Agents for the Sale of Punjab Government Publications.

---

### IN THE UNITED KINGDOM.

CONSTABLE & Co., 10, Orange Street,  
Leicester Square, London, W.C.

KEGAN PAUL, TRENCH, TRÜBNER & Co.,  
Limited, 68-74, Carter Lane, E.C.,  
and 25, Museum Street, London,  
W.C.

BERNARD QUARITCH, 11, Grafton Street,  
New Bond Street, London, W.

T. FISHER UNWIN, Limited, No. 1,  
Adelphi Terrace, London, W.C.

P. S. KING & SON, 2 & 4, Great  
Smith Street, Westminster, London,  
S.W.

H. S. KING & Co., 65, Cornhill, and 9,  
Pall Mall, London.

GRINDLAY & Co., 54, Parliament Street,  
London, S.W.

W. THACKER & Co., 2, Creed Lane,  
London, E.C.

LUZAC & Co., 46, Great Russell Street,  
London, W.C.

B. H. BLACKWELL, 50 and 51, Broad  
Street, Oxford.

DEIGHTON BELL & Co., Limited, Cam-  
bridge.

OLIVER & BOYD, Tweeddale Court,  
Edinburgh.

E. PONSONBY, Limited, 116, Grafton  
Street, Dublin.

WILLIAM WESLEY & SON, 28, Essex  
Street, Strand, London.

### ON THE CONTINENT.

ERNEST LEROUX, 28, Rue Bonaparte,  
Paris, France.

MARTINUS NIJHOFF, The Hague, Hol-  
land.

### IN INDIA.

THE MANAGER Imperial Book Depôt,  
Delhi.

GULAB SINGH & SONS, Mufid-i-'Am  
Press, Lahore.

MANAGER, Punjab Law Book Depôt,  
Anarkali Bazar, Lahore.

RAMA KRISHNA & SONS, Book-sellers  
and News Agents, Anarkali Street,  
Lahore.

HONORARY SECRETARY, Punjab Religious  
Book Society, Anarkali, Lahore.

N. B. MATHUR, Superintendent and  
Proprietor, Nazir Kanun Hind Press,  
Allahabad.

D. B. TARAPOREVALA, SONS & Co.,  
Bombay.

THACKER, SPINK & Co., Calcutta and  
Simla.

NEWMAN & Co., Calcutta.

R. CAMBRAY & Co., Calcutta.

THACKER & Co., Bombay.

HIGGINBOTHAMS, Limited, Madras.

T. FISHER UNWIN, Calcutta.

V. KALYANARAM IYER & Co., 189,  
Esplanade Row, Madras.

G. A. NATESAN & Co., Madras.

SUPERINTENDENT, AMERICAN BAPTIST  
MISSION PRESS, RANGOON.

**REPORT**  
ON THE  
**SANITARY ADMINISTRATION OF THE PUNJAB**  
AND  
**PROCEEDINGS OF THE SANITARY BOARD**  
FOR THE YEAR 1919

BY  
LIEUT.-COLONEL W. H. C. FORSTER, D.P.H., I.M.S.,  
*Sanitary Commissioner, Punjab,*

AND  
**THE REPORT ON SANITARY WORKS FOR 1919**

BY  
MR. A. R. ASTBURY,  
*Sanitary Engineer, Punjab.*



REPORT  
OF THE  
SANITARY ADMINISTRATION OF THE GOVERNMENT  
OF THE DISTRICT OF COLUMBIA  
PROCEEDINGS OF THE SANITARY BOARD  
FOR THE YEAR 1919

THE REPORT OF SANITARY WORKS FOR 1919

Digitized by the Internet Archive  
in 2019 with funding from  
Wellcome Library



## **Section II.—European Army.**

No remarks.

## **Section III.—Native Army.**

No remarks.

## **Section IV.—Jails.**

No remarks.



## **Section VII.—Vaccination.**

(Separate report.)

## **Section VIII.—Sanitary Works, Military.**

No remarks.

Section II—European Army

No number

Section III—Active Army

No number

Section IV—Jails

No number



Section V—Vagrants

(Separate report)

Section VI—Sanitary Works, Military

No number

(The text of the Sanitary Report is limited to 20 pages and that of the Sanitary Engineer to 4 pages.)

## TABLE OF CONTENTS.

| Para.                               | Subject.   | Page.      |
|-------------------------------------|--|------------|
| <b>SECTION I.—METEOROLOGICAL.</b>   |  |            |
| 1                                   | Chief Meteorological feature ... ..  | 1          |
| 2                                   | Price of food-grains ... ..  | <i>ib.</i> |
| 3                                   | Wages of labour ... ..   | <i>ib.</i> |
| <b>SECTION V.—VITAL STATISTICS.</b> |  |            |
| 4                                   | Population ... ..  | 2          |
| 5                                   | General summary ... ..   | <i>ib.</i> |
| 6                                   | Births. Annual Form No. I ... ..   | <i>ib.</i> |
| 7                                   | Birth-rates of other provinces ... ..  | <i>ib.</i> |
| 8                                   | Birth-rate in large towns ... ..   | <i>ib.</i> |
| 9                                   | Highest and lowest birth-rates. Annual Form No. 1 ... ..   | 3          |
| 10                                  | Excess of births over deaths. Annual Form No. I ... ..   | <i>ib.</i> |
| 11                                  | Deaths. Annual Form No. II ... ..  | <i>ib.</i> |
| 12                                  | Death-rates in other provinces ... ..  | <i>ib.</i> |
| 13                                  | Deaths by districts. Annual Form No. II ... ..   | <i>ib.</i> |
| 14                                  | Seasonal mortality. Annual Form No. III ... ..   | <i>ib.</i> |
| 15                                  | Death-rates according to different diseases under specified age periods—<br>Annual Form No. IV ... ..          | 4          |
| 16                                  | Deaths by classes. Annual Form No. V ... ..  | <i>ib.</i> |
| 17                                  | Deaths in towns and rural circles. Annual form No. VI A and B ... ..   | <i>ib.</i> |
| 18                                  | Inspection of birth and death registers ... ..   | 5          |
| 19                                  | Births and deaths among employees at railway stations ... ..   | <i>ib.</i> |
| 20                                  | Births and deaths among Europeans and Anglo-Indians ... ..   | <i>ib.</i> |
| 21                                  | Births and deaths among the non-military population of cantonments.<br>Appendix to Annual Form No. VI B ... .. | <i>ib.</i> |
| <b>SECTION VI.—CHIEF DISEASES.</b>  |  |            |
| 22                                  | Cholera. Annual Form No. VII ... ..  | 6          |
| 23                                  | Small-pox. Annual Form No. VIII ... ..   | 7          |
| 24                                  | Plague ... ..  | 8          |
| 25                                  | Fevers. Annual Form No. IX ... ..  | 10         |
| 26                                  | Influenza ... ..   | 12         |
| 27                                  | Relapsing fever ... ..   | <i>ib.</i> |
| 28                                  | Enteric fever ... ..   | 13         |
| 29                                  | Encephalitis lethargica ... ..   | <i>ib.</i> |
| 30                                  | Dysentery and Diarrhoea. Annual Form No. X ... ..  | <i>ib.</i> |
| 31                                  | Respiratory diseases. Annual Form No. XI ... ..  | 14         |
| 32                                  | Injuries. Annual Form No. II ... ..  | <i>ib.</i> |
| 33                                  | All other causes. Annual Form No. II ... ..  | <i>ib.</i> |
| 34                                  | Rabies ... ..  | <i>ib.</i> |
| <b>SECTION IX.—SANITARY WORKS.</b>  |  |            |
| 35                                  | Sanitary Works ... ..  | 15         |
| 36                                  | Sanitary note-books ... ..   | <i>ib.</i> |
| 37                                  | Rewards for sanitation ... ..  | <i>ib.</i> |
| 38                                  | Cleaning of wells and construction of parapets ... ..  | <i>ib.</i> |
| 39                                  | Sale of street sweepings ... ..  | <i>ib.</i> |
| 40                                  | Land under sewage irrigation ... ..  | <i>ib.</i> |
| 41                                  | Village sanitation ... ..  | <i>ib.</i> |
| 42                                  | Income and expenditure of Municipalities and District Boards ... ..  | <i>ib.</i> |
| 43                                  | Works of public utility by private individuals ... ..  | 16         |
| <b>SECTION X.</b>                   |  |            |
| 44                                  | Administration ... ..  | 17         |
| 45                                  | General sanitation ... ..  | <i>ib.</i> |



| Para.         | Subject.  | Page.   |
|---------------|---|---------|
| 46            | Inspection work of Civil Surgeons and Assistant Surgeons ... ..   | 19      |
| 47            | Free distribution of quinine ... ..   | ib.     |
| 48            | Filling up of depressions ... ..  | ib.     |
| 49            | Lectures on hygiene at Medical College, Lahore ... ..   | ib.     |
| 50            | Lectures on principles of Elementary Hygiene to vaccinators ... ..  | ib.     |
| 51            | Health Officers and Sanitary Inspectors ... ..  | ib.     |
| 52            | Education of the General Public in Elementary Hygiene ... ..  | ib.     |
| 53            | Formation of new towns in the vicinity of the North-Western Railway ... ..  | 20      |
| 54            | Work of the Provincial Laboratory .. ...  | ib.     |
| APPENDIX A.   |   |         |
|               | Proceedings of the Sanitary Board, Punjab ... ..  | 4       |
| APPENDIX B.   |   |         |
|               | Annual Report of the Sanitary Engineer to Government, Punjab, for the year 1919 ... ..  | iii     |
| APPENDIX C.   |   |         |
|               | Statement showing the death-rates from cholera, small-pox, fevers and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns ... .. | x       |
| ANNUAL FORMS. |   |         |
| I             | Statement showing the births registered in the districts of the Punjab during the year 1919 ... ..  | i       |
| II            | Statement of births and deaths registered in each district of the Punjab during the year 1919 ... ..  | ib.     |
| III           | Deaths registered in the districts of the Punjab during each month of the year 1919.. ... ..  | 10      |
| IV            | Deaths registered according to specified age periods from different diseases in the districts of the Punjab during the year 1919 ... ..   | v       |
| V             | Deaths registered according to classes in the districts of the Punjab during the year 1919 ... ..   | xvi     |
| VI            | Deaths registered from different causes in the districts (rural circles) of the Punjab during the year 1919 ... ..  | xvii    |
|               | Deaths registered from different causes in the towns of the Punjab during the year 1919 ... ..  | xviii   |
| VI B          | Births and deaths registered in the cantonments of the Punjab during the year 1919 ... ..   | xix     |
| VII           | Deaths registered from cholera in the districts of the Punjab during each month of the year 1919 ... ..   | xxi     |
| VIII          | Deaths registered from small-pox in the districts of the Punjab during each month of the year 1919 ... ..   | xxvii   |
| IX            | Deaths registered from fevers in the districts of the Punjab during each month of the year 1919 ... ..  | xxviii  |
| X             | Deaths registered from dysentery and diarrhoea in the districts of the Punjab during each month of the year 1919 ... ..   | xxx     |
| XI            | Deaths registered from respiratory diseases in the districts of the Punjab during each month of the year 1919 ... ..  | xxxi    |
| XII           | Deaths registered from plague in the districts of the Punjab during each month of the year 1919 ... ..  | xxxii   |
| STATEMENT.    |   |         |
| I             | Monthly statement of plague occurrences in British districts and Native States in the Punjab during the year 1919 ... ..  | xxxviii |



*Proceedings of His Honour the Lieutenant-Governor of the Punjab in the Home (Sanitary) Department, No. 877-S., dated the 12th June 1920.*

READ—

The report on the Sanitary Administration of the Punjab for the year 1919.

**REMARKS.**—The year 1919 was an extremely healthy one and the Province was visited by only two epidemics, cholera and small-pox, of which neither was of great severity. The arrival of the monsoon was delayed by nearly a month and, though, while it lasted, the rainfall was above the average, it retreated from the Province earlier than usual. The meteorological conditions were therefore unfavourable to a serious epidemic of malaria, the incidence of which (in the absence of such a severe epidemic of influenza as occurred in 1918) is the determining factor in the health of the Province. The prices of food-grains continued to rise and touched record figures, but the wages of the labouring population also rose and the statistics of the year indicate that the public health was not adversely affected by high prices.

2. The birth rate 40·3 shows only a very slight increase over that for 1918 and a decrease of 3·8 as compared with the previous quinquennial average. This, however, was only to be expected after the influenza outbreak of the previous year, and it is satisfactory to find that, despite the undermining of the health of the Province by an epidemic of such unprecedented violence, the Punjab has not only wrested premier position as regards birth rate from the Central Provinces, but also that the figure was no less than 5·97 above that for the latter province, which reverted to second place. Among districts the two colony districts of Montgomery and Lyallpur returned the highest rates with 50·7 and 49·0 respectively, and in addition Rohtak, Karnál, Ludhiána, Ferozepore, Lahore, Amritsar, Gujránwála, Miánwáli, Jhang and Multán all return rates above the Provincial average.

As is usually the case, Simla and Dera Gházi Khan stand last with rates of 21·1 and 25·5 respectively. Taken as a whole the eastern districts which suffered most severely from influenza show a decrease over the birth rate of last year, while the western districts where the epidemic was less acute, are responsible for the improvement which has taken place, the greatest increase being in Montgomery where the rate is 14·7 over that for 1918. It is satisfactory to note that, except in the case of Simla only, a natural increase of population was recorded in all districts. The urban population was less affected by influenza than the rural population and, consequently, all the principal towns show an increase both over the previous year and the quinquennial average, and Multán with a rate of 49 has displaced Amritsar from the premier position which it previously held with a quinquennial average of 45.

3. The death rate for the whole Province was, with the exception of 1912, the lowest recorded since 1900 and shows a welcome decrease from 43·6 to 28·3 as compared with the previous quinquennium. The decrease as compared with the previous year's appalling figure of 81 is due to the absence of influenza, while the cause of the decrease as compared with the 5 years' average is the comparative lightness of the plague and malaria epidemics. It is satisfactory to find that the rate is not far from being the lowest recorded in India. In rural areas the highest rate (39·0) was recorded in Gurgaon District, while Shahpur with 21·5 can claim to be the healthiest district in the province. In only seven districts—Gurgaon, Karnál, Rohtak, Ambála, Kangra, Montgomery and Gujránwála of which 4 are in the Ambála Division,—was the rate over 30, whereas during the previous year there was only one district, Simla, with a rate of less than 50. There was only a slight divergence in rates for the 3 largest towns, which varied between 34·03 for Lahore and 36·2 for Amritsar, and these figures compare very favourably with the previous quinquennial averages of 53·47, 46·39 and 42·02 for Amritsar, Multán and Lahore, respectively. Of the smaller towns Ichhra holds the proud position of having the lowest recorded rate of 8·74, but at the other end of the scale Pattoki, Sámga and Chuharkána are responsible



for the very heavy returns of 73.94, 72.45 and 71.43 respectively. No other town, however, has a rate of over 60. The towns as usual show a heavier death rate than the districts, the difference amounting to 6.17. The mortality among infants under one year of age 189.33 for males and 188.04 for females calculated on the number of births during the year) continues distressingly high, but it is to be hoped that, with the spread of hygienic principles, assisted as it will be by the strengthening of the department directly responsible for the public health of the province, the rate will gradually be reduced to one comparable with that existing in more advanced communities. The Sanitary Commissioner while recognizing the value of the supply of medical assistance to combat the present evil urges the equal importance of sanitary conditions. "So long," he says "as we have grossly overcrowded towns where every law of hygiene is consistently and systematically defied; where the people breathe filth and through the agency of myriads of flies, eat filth; from which light and air are excluded; and where every article of diet is consistently adulterated—so long will we have mortality rates, infantile and otherwise, expressive of such a state of affairs." The Lieutenant-Governor hopes that the pertinent remarks of the Sanitary Commissioner with regard to the effect of insanitary surroundings on infantile mortality will be taken to heart by all those who, by their example and efforts, are capable of exercising influence in hygienic matters.

4. Cholera was more prevalent than in any year since 1915 and was responsible for 8,561 recorded deaths. The mortality was greatest in Attock and Lyallpur where 2,022 and 1,380 deaths were registered. The disease originated mainly in two centres of infection, Kohát and Hardwár. The latter place is a well known and continual source of danger and the first case of the year which occurred in April at Amritsar was traced to Hardwár. The outbreak in Attock was due to infection from the army in the Kohát area. All districts except Simla recorded deaths, though the mortality in Kangra, Montgomery, Multán and Muzaffargarh was under 100 in each case and the rate of deaths *per mille* exceeded one in the case of Ráwalpindi, Attock and Lyallpur only.

5. A serious outbreak of small-pox, which caused 15,365 deaths, occurred during the year. The disease was prevalent at the end of 1918 and reached its climax during the hot weather when 2,717 and 1,863 deaths were recorded during the months of June and July respectively. The outbreak, however, was very far from having been stamped out by the end of the year as is shown by the regrettable fact that 1,418 deaths were recorded in December. The ratio of deaths was 79 *per mille* as compared with the quinquennial average of 12 *per mille*. No district was free from infection and Hoshiárpur, Ferozepore, Montgomery, Lahore, Lyallpur and Hissar all returned more than 2,000 deaths while the mortality rate was high also in Montgomery, Hoshiárpur, Ferozepore, Jhelum and Ráwalpindi. The large percentage of fatal cases which occurred among children under ten years of age points to neglect of infantile vaccination, while the high rate of mortality in towns in which the Vaccination Act is not compulsory, is a reproach to the communities concerned. The Sanitary Commissioner applies to small-pox the classical remark that 'for every death from typhoid fever some one ought to be hanged.' The Lieutenant-Governor agrees that it is extremely regrettable that such a large mortality should occur from a disease, the preventive measures against which are so certain and well-known, and the proposals of the Sanitary Commissioner with regard to further preventive steps will receive the careful consideration of Government.

6. The mortality from plague shows a satisfactory decline from the figures of the previous year and the number of deaths recorded in British districts is, with the exception of the years 1916 and 1917, the smallest for the last 10 years. Special efforts were made to stamp out infection in the towns of Ráwalpindi and Multán which remain the two principal foci of infection in the Province. These measures, though they may not be immediately effective, are certain to bear fruit in time and the Lieutenant-Governor wishes to acknowledge the good services of the gentlemen whose work has been specially brought to the notice of Government in this connection. It is impossible to foresee



whether there will be a recrudescence of the disease on a large scale, but it seems unlikely to attain its former virulence if the campaign against it is systematically continued, and it is therefore of paramount importance that the efforts which are now being made in this direction should not cease.

7. Fever diseases were not more markedly prevalent than usual, the total number of recorded deaths being 365,045. The death rate was 18·88 *per mille* of population, and was 3·72 higher in the districts than in the towns. Of the districts Gurgaon, Karnál and Muzaffargarh all returned a fever death rate of over 22, while among the towns, Chuharkána and Rájanpur with rates of 37·47 and 34·02, respectively, came into unwelcome prominence. Malarial fever on the whole was not as prevalent as usual, while influenza after its outburst in 1918 sank into comparative insignificance.

8. The end of the war was marked by a relaxation of financial restrictions and grants-in-aid amounting to Rs. 4,30,866 were made by the Sanitary Board during the year, among the more important schemes financed being the Rohtak Drainage Scheme and the Gujránwála Water Supply Scheme. The year under review was a busy one for Mr. Astbury who held the post of Sanitary Engineer throughout, and many important sanitary projects were either initiated or completed. A large number of drainage schemes received the administrative approval of the Board, and under its fostering care the general sanitation of the urban areas is making a rapid advance, but the same remark unfortunately does not apply to the rural areas, where little advantage is taken of the powers under the District Boards Act of imposing taxation for purposes of village sanitation or of framing simple sanitary rules. With the passing of the Small Towns Bill, which will, it is hoped, shortly be ready for submission to the New Council, progress in rural sanitation should be more rapid. Meanwhile the Lieutenant-Governor is gratified to note that private effort is not wanting and he desires to thank the gentlemen mentioned in the report for the generous donations by means of which many works of public utility have been constructed in the rural areas.

9. Lieutenant-Colonel Forster remained in charge of the office of Sanitary Commissioner throughout the year and the Lieutenant-Governor desires to put on record his appreciation of the very marked ability and enthusiasm with which he has carried out his duties and in particular to thank him for a most interesting report. Lieutenant-Colonel Forster has an intimate knowledge of the principles of public health administration, and it is largely due to this that the satisfactory steps mentioned in section X of the report were taken during the year towards laying the foundation of a sound structure of preventive medicine. His Honour also acknowledges the energy and skill with which Lieutenant-Colonel Mackenzie and Dr. K. A. Rahman have carried out the arduous duties of Deputy Sanitary Commissioner and additional Deputy Sanitary Commissioner respectively, and he appreciates also the excellent work done by the Sanitary Board and the Sanitary Engineer.

---

ORDER :— Ordered that a copy of the foregoing remarks be circulated with report and be furnished with the usual number of copies of the report to the Government of India ; also that the review be published in the *Punjab Government Gazette*.

Ordered, also, that a copy be furnished to the Sanitary Commissioners, Punjab, for information.

By order of the Lieutenant-Governor of the Punjab,

B. T. GIBSON,

*Financial Secretary to Government, Punjab.*





## Section I.

The following brief summary of the Chief Meteorological features of the Punjab during the year 1919 was supplied by the Director-General of Observatories.

Rainfall was much heavier than usual in January over almost the whole province and much lighter, on the whole, in February. March was also drier than usual. In April rainfall was above the average in the south-west Punjab, and below it over the rest of the province. In May it was greatly in excess in the south-west Punjab, and nearly normal in the east and north Punjab. The monsoon rains, which generally begin about the middle of June, broke on the 12th July in 1919, with the result that rainfall was greatly in defect in June. It was, on the whole, above normal in July and August; but in September it was much below normal, the monsoon having retreated from the province on the fourth of that month about ten days before the usual time. There was hardly any rain in October and November, but in December winter depressions appeared fairly frequently, especially in the latter part of the month, and rainfall was widespread and much heavier than usual.

The departures from normal of humidity and cloud amount agreed, on the whole, with those of rainfall. Maximum temperature was below normal by  $3^{\circ}$  in April, and by  $4^{\circ}$  in December. Both maximum and minimum temperatures were much higher than usual in June; the highest temperature recorded in the province during the year was  $119^{\circ}$  on the 7th June at Multan.

2. The return supplied by the Director of Land Records, Punjab, shows that the average retail price of wheat during the year 1919 was  $6\frac{1}{4}$  seers per rupee at Ambala,  $6\frac{7}{8}$  at Lahore,  $6\frac{3}{8}$  at Rawalpindi and  $6\frac{1}{8}$  at Multan. The average rates of barley were  $6\frac{3}{8}$  seers at Ambala,  $9\frac{3}{8}$  at Lahore,  $7\frac{3}{8}$  at Rawalpindi and  $8\frac{3}{4}$  at Multan and that of Jowar  $6\frac{9}{16}$ ,  $6\frac{5}{8}$ ,  $6\frac{1}{4}$ , and  $7\frac{5}{16}$ , respectively.

As regards bajra the average rates varied from  $5\frac{9}{16}$  to  $7\frac{1}{4}$  seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize from  $7\frac{1}{4}$  to  $8\frac{3}{8}$  and that of gram  $6\frac{1}{8}$  to  $7\frac{5}{16}$  seers per rupee.

The prices were higher than in the preceding year and the rise was due to unsatisfactory outturn, large exports and restrictions on goods traffic.

3. Since the second regular wages survey of the Punjab was taken in December 1917 a further rise in wages has occurred, but no data are available in the office of the Director of Land Records for determining the extent of this rise.



## Section V.—Vital Statistics.

4. The rough estimated population for the year under report prepared by adding births and subtracting deaths since the last census report, works out to 20,435,917 (11,235,862 males and 9,200,055 females) as against the census population of 19,337,146 (10,608,101 and 8,729,045). Calculated on this estimated population the birth rate is 38·3, i.e., 2·0 *per mille* less than the rate calculated on the census figures, and similarly the death rate 26·8 is less by 1·5. In individual districts the rates calculated on the census figures are in excess in all the districts in the province except in the districts of Gurgaon, Simla and Dera Ghazi Khan, these being those districts in which the estimated population shows a reduction as compared with the census figures. In the previous year the districts which showed such a reduction were Gurgaon, Simla, Rawalpindi and Dera Ghazi Khan.

5. The health of the Province during the year under report was exceptionally good. The total death rate (28·34) from all causes being lower, with the exception of 1912, than it has been since 1900. Except Cholera and Small-pox which accounted for more deaths than in recent years, no other cause of mortality except "Injuries" shows an increase, while the reduction in the death rate from fevers when compared with the last year is no doubt attributable to the absence of both Malaria and Influenza in an epidemic form. The birth rate is not so satisfactory though it is higher than that recorded last year.

6. Births.—The total number of births registered this year was 778,846 of which 413,018 were males and 365,828 females, the respective rates being 40·3, 21·4 and 18·9. The total rate shows an increase of 0·7 compared with last year and a decrease of 3·8 compared with the average for the previous five years. A comparison by districts with the quinquennial average discloses the fact that the rate in 1919 was less in all the districts of the five divisions excepting Mianwali in the Rawalpindi Division and the districts of Montgomery, Lyallpur, Jhang and Multan of the Multan Division where it was in excess. The rate for Simla was equal to the quinquennial average.

Compared with the previous year the rate was in defect in the whole of the Ambala and Jullundur Divisions excepting the Gurgaon District. With the exception of Gurdaspur, Sialkot and Gujrat Districts it was greater in the Lahore, Rawalpindi and Multan Divisions.

The birth rate for 1919 is simply the continuation of the history of the Influenza Epidemic of last year. The south-eastern and southern districts which suffered most from that epidemic show a decrease in the birth rate, and in general the birth rate of a district is a fair indication of the severity of the epidemic.

7. The Central Provinces, that had been returning the highest birth rate for the last two years, had to yield this place of honour during 1919 to the Punjab, where it amounted to 40·28, the former standing second with a ratio of 34·31 followed by the United Provinces, Assam and Bihar and Orissa, with rates of 32·39, 30·52 and 30·46, respectively. Of the remaining provinces the rates were Burma 29·89, North-West Frontier Province 28·62, Bombay 27·90, Bengal 27·5 and Madras 25·52.

8. The birth rate in the 38 principal towns amounted to 45·6 *per mille* against 41·1 last year and 41·6, the average for the previous 5 years. The rates in the three largest towns were as follows:—Multan 49, Amritsar 47 and Lahore 41; the corresponding rates for last year being 34, 38 and 36 and the average for the previous 5 years 41, 45 and 38. These towns show an increase in the birth rate compared with both the rates recorded in the previous year and the average for the previous 5 years.



9. The highest birth rate this year was recorded in Montgomery where it was 50.7, followed closely by Lyallpur with 49.0, slightly in excess of the highest rate (49.2) recorded in Rohtak last year.

Highest and lowest birth rates (A. F. No. I) in the districts.

The other districts with a comparatively high rate were Lahore 46.3, Jhang 45.1, Amritsar 44.5, Rohtak 43.9, Mianwali 43.3, Multan 42.6, Karnal 42.4 and Ferozepore 42.1.

As usual the lowest rate was recorded in Simla where it amounted to 21.1, while next in order come Dera Ghazi Khan 25.5, Muzaffargarh 32.2, Kangra 32.5 and Jhelum 32.9. Of the 28 districts in the province 12 had a birth rate higher than the provincial rate of 40.3.

10 The natural increase of population, i.e., excess of births over deaths amounted to 12.0 *per mille* in the year under report. With the exception of Simla where the death rate was higher than the birth rate, all the other districts record an excess of birth over death rates. Lyallpur heads the list with 22.7 followed by Jhang with 20.4, Montgomery 19.0, Lahore registering 18.1 and Amritsar 17.0. In the other districts it ranges from 15.6 in Multan to 0.8 in Kangra. Last year the position was very different, the death rate being 41.4 *per mille* in excess of the birth rate.

Excess of births over deaths (A. F. No. I).

11. Deaths.—The total number of deaths during 1919 was 548,070 of which 291,266 were males and 256,804 females, the resulting rates being 28.3, 27.5 and 29.4. The corresponding rates for the previous year were 81.0, 75.2 and 88.0, and the averages for the previous five years 43.6, 40.8 and 46.9. Of this death rate 18.9 or more than half was due to "Fevers," 4.9 to "all other causes" and 2.0, 0.8 and 0.4 to Respiratory diseases, Small-pox, and Injuries, respectively. The marked decrease in the Provincial death rate is due to the lessened incidence of Plague and Fevers which show rates of 0.6 and 18.3, respectively, as compared with 4.9 and 66.6 in the preceding year.

Deaths (A. F. No. II).

12. The highest death rate, namely, 50.09, was registered in Assam, Central Provinces coming next with 43.24, followed by the United Provinces with 41.69, Bihar and Orissa 40.0, Bengal 36.2, Bombay 32.53, Burma 31.09, North-West Frontier Province 28.56. The Punjab which stood fourth last year is now ninth in the list with a rate of 28.34. The lowest death rate 27.23 was recorded in Madras.

Death rates in other Provinces.

13. With one exception, Simla, the death rates by districts was considerably lower than that of last year and the average for the previous 5 years. The highest death rate 39.0 was recorded in Gurgaon whilst in Karnal, Rohtak, Ambala, Kangra and Montgomery the rates were 35.2, 35.0, 32.0, 31.7 and 31.7, respectively. The lowest rate was recorded in Shanpur 21.5 followed closely by Dera Ghazi Khan with 21.7. In the remaining districts it varied between 30.1 in Gujranwala and 24.7 in Jhang.

Deaths by districts (A. F. No. II).

14. August with a death rate of 1.72 was as usual the healthiest month. Next in order come March and April 1.98, February 2.01, July 2.06, May 2.29. The quarterly death rate was January-March 6.70, April-June 6.74, July-September 6.22, October-December 8.67.

Seasonal Mortality (A. F. III).

The rates were as usual higher in the last quarter of the year (the malarial season) owing to fevers, unhealthiness beginning with September when the recorded death rate was 2.44, rising to 2.89 in October, and reaching the highest rate (2.90) in November.

15. As usual infants under one year of age had the highest mortality amounting to 184.15 for males and 170.10 for females, figures for the previous year being 248.83 and 235.91, respectively. Calculated on the number of births during the year the rates work out at 189.33 and 188.04 for males and females, respectively, as against 261.19 and 264.36 in the year

Death rates according to different age periods (A. F. No. IV).



previous, showing a marked reduction of 71·86 in the case of males and 76·32 in that of females. Next to infants old people of 60 and upwards suffered most, the rates for that age period being 66·49 for males and 64·94 for females; children between one and five coming next with rates of 49·12 and 50·30. Those between 50 and 60 had rates of 28·28 and 27·26, in the others it ranged between 8·87 the male rate in the 10 to 15 years group and 18·55 in the 40 to 50 year group. The mortality among females was higher than that amongst males in all the age periods except that under one year and that between 40 and 60 and upwards.

The total mortality rate for infants under one year is 177·29 and is a fair index of the position of the Province on the scale of material civilisation, the corresponding English rate of 71 for the last quarter of 1919 constituting an instructive standard of comparison. At present the subject of Infantile Welfare is very much to the fore and, as it seems in danger of being forgotten, I would emphasise the fact that infantile mortality is influenced just as much by the general conditions of livelihood as by the nature of the medical assistance available. So long as we have grossly overcrowded towns where every law of Hygiene is consistently and systematically defied; where the streets are public latrines, cess-pits, filth go-downs, and manure heaps; where the people breathe filth and, through the agency of myriads of flies, eat filth; from which light and air are excluded; and where every article of diet is consistently adulterated—so long will we have mortality rates, infantile and otherwise, expressive of such a state of affairs. The Therapeutic branch of medicine by means of the various Associations in formation is up and doing, but in the long run it is the Preventive branch, proceeding by methods necessarily slow, costly, and unspectacular, which will right the position. The Preventive branch is also up and doing, as will be shown in another part of this Report, but I would like to bring home to every Municipal Councillor that he, individually, is part and parcel of the general organisation of Preventive Medicine, and that without his earnest, and unselfish co-operation the pace of progress will be lamentably slow.

16. After several years the district of Gujranwala recorded less deaths under "other classes" than the actual numerical population of this class; in practically all districts the number of deaths registered under this head was unusually small, 494·95 the highest standing against Gujranwala. The total rate for the whole Province for this class was 17·02 against 107·01 in the year preceding. The rates for the other classes were Muhammadans 28·32, Hindus 28·33, Indian Christians 31·32 as against 81·32, 80·09, 100·80 in the year preceding. The death rate among Hindus exceeded that among Muhammadans in the districts of Kangra, Hoshiarpur, Amritsar, Jhelum, Rawalpindi, Jhang, Multan, Muzaffargarh, and in the first three districts the Hindu population predominates.

17. The urban rate which was 33·95 exceeded the rural rate 27·78 under all the heads of the mortality except fever under which head the recorded excess against the rural circles was 3·72. This excess is due to misclassification as deaths from plague are mostly returned under the head of fevers. The rates recorded in the three largest towns were Amritsar 36·2, Multan 35·67 and Lahore 34·03, and are considerably less than the rates recorded in the previous year 71·90, 75·77, 62·41 and the average for the preceding five years 53·47, 46·39 and 42·02.

Among the minor towns in the province the lowest rate was recorded in Ichhra 8·74, Badomali coming next with 12·79. In the following towns the rate was below 20·0 *per mile*—Samberial 14·64, Akalgarh 14·96, Moga 15·25, Shahpur 15·56, Bhopalwala 15·89, Zaffarwal 18·17, Chawinda 18·74, Kangra 19·61, Sargodha 19·78 and Dharmsala 19·86. These low rates are attributable to the entire absence of plague and to a comparatively low rate of fever in the localities in question. The highest rates were recorded in Pattoki Mandi 73·94, Sangla 72·45, Chuharkana 71·43, Palwal 57·46, Bahadurgarh 54·71, Mukerian 54·55, Shahkot 53·13, Jhelum 52·69, Beri 51·17 and Fazilka 50·61. The high rate in all these towns was either due to fevers or to the excessive mortality from plague and cholera. In Chuharkana the deaths recorded under the



head "all other causes" and in Mukerian, Fazilka and Gujranwala and Pattoki Mandi those recorded under small-pox also helped to swell the death rate.

18. There is an increase of 66,341 in the total number of vital occurrences investigated during the year as compared with last year. The actual numbers checked were 693,767 in birth and 662,697 in death registers.

Inspection of birth and death registers.

The percentage of omissions detected to total number of entries checked by Divisional Inspectors worked out at 2.19 and 2.21 for male and female births and 1.07 and 1.05 for male and female deaths; those checked by Superintendents of Vaccination and Vaccinators at 1.46 and 1.51 for births and 0.79 and 0.85 for deaths; those by the revenue staff at 1.40 and 0.91 for male and female births and 1.26 and 1.09 for deaths.

The number of chaukidars punished for neglecting to report cases of domestic occurrence was 14, the total fines amounting Rs. 21-12-0 only, while in the Karnal, Shahpur, Attock and Jhang Districts in some cases the men at fault were merely warned for their negligence. In municipal towns fines for neglect in complying with municipal bye-laws for the registration of births and deaths were imposed on 241 persons and amounted to Rs. 238 against 218 persons fined Rs. 370 in the preceding year.

19. During the year 71 births and 63 deaths were recorded at railway stations outside municipal limits against 75 and 151, respectively, in the preceding year. Of the deaths 39 were due to fevers, 7 to diseases of respiratory organs, 7 to injuries, 6 to dysentery and diarrhoea, 2 to all other causes and one each to cholera and small-pox.

Births and deaths among employees at Railway Stations.

20. There were 201 births and 167 deaths amongst Europeans and Anglo-Indians as against 263 and 162 respectively, last year. The deaths were distributed as follows:—All other causes 106, respiratory diseases 20, fevers 16, injuries 15, cholera 8, and small-pox and plague 1 each.

Births and deaths among Europeans and Anglo-Indians.

21. There were 3,858 births and 3,340 deaths among the non-military population of Cantonments showing an increase of 311 in the former and a decrease of 3,964 in the latter compared with the previous year. The deaths were classified as follows:—Fevers 1,610, all other causes 1,102, respiratory diseases 400, dysentery and diarrhoea 98, cholera 5, injuries 41, plague 21 and small-pox 13. There was a decrease under every head of mortality except cholera when compared with the figures for the last year.

Births and deaths among the non-military population of Cantonments (Appendix to A. F. No. VI-b.)



## Section VI.—Chief Diseases.

22. Cholera was more prevalent in the year under report than in the previous year. It caused 8,61 deaths as compared with 257 deaths in 1918, 1,365 deaths in 1917, 1,651 in 1916 and 13,196 in 1915. Deaths from cholera were registered in all the districts of the province except Simla and the mortality was greatest in the Attock District where 2,022 deaths were registered. Lyallpur coming next with 1,380, Gujranwala 858, Rawalpindi 601, Gurgaon 505, Lahore 481, Amritsar 459, Karnal 372, Mianwali 324, Ferozepore 268, Gujrat 266 and Shahpur 229 and in the remaining districts the mortality did not exceed 200.

Out of 145 towns in the province only 63 recorded deaths from cholera the total number being 1,120 during the year under report. The highest number of deaths, *viz.*, 136, was recorded in the Rawalpindi town, Lahore coming next with 101 deaths, Amritsar 83, Fazilka 68, Karnal 62, Jullundur 46, 45 each in Sialkot, Sangla and Gujrat, 35 in Tarn Taran, 33 each in Batala and Chiniot and 32 in Rewari. In other towns the mortality was less than 30.

The disease made its appearance in April in which month 35 deaths were recorded and in May the number of deaths increased to 273 while in June it reached to 1,436. The largest number of deaths was recorded in July in which month no less than 3,762 deaths were recorded. In the month of August and September the number fell to 1,464 and 1,490, respectively, while in October it declined to 101, and thereafter the disease was over.

Of the total deaths from cholera, *viz.*, 8,561, recorded during the year the source of infection in the case of 373 deaths was traced to Hardwar and in most places the outbreak of the disease was, as usual, due to importation of infection from the centres directly infected from Hardwar.

The disease made its appearance early in April and the outbreak was as sudden as it was unexpected when the first case occurred at Amritsar on 7th. The victim was a Hindu male, aged 35 years, who had returned from Hardwar. He was brought to the Civil Hospital where he died the same day. Only 4 deaths were recorded at Amritsar during the month and the disease subsided. It may be noted that these cases had no connection with each other.

The epidemic was very severe in the Attock District. It started in villages near the Railway Stations of Jand and Basal on 1st June and within a week the outbreak spread from village to village in the Pindigheb and Talagang Tahsils, while the adjoining tahsil of Fatehjang became infected on the 29th June. The disease was originally imported from Kohat and Thal, where villagers employed at work in cantonments contracted the disease and fled to their homes spreading infection on their way back. The number of deaths in this district totalled 2,022.

Next comes Lyallpur District in which 1,380 deaths were recorded in 182 villages and 5 towns. The disease first appeared on the 25th April in the town of Tandlianwala in the person of a Hindu male of 35 years age who had himself returned from Hardwar where cholera was prevalent. The epidemic in this town resulted in 26 cases and 15 deaths.

The epidemic in Rawalpindi city commenced on 9th June and resulted in 136 deaths. The disease was imported by a Hindu youth, aged 25 years, who came from the Kohat infected area on the morning of the 9th and immediately after his arrival developed the symptoms of cholera and died. The Additional Deputy Sanitary Commissioner inspected the city twice and when on the second visit it appeared to him that the disease was mostly spread through food supplies, particularly fruits imported from Peshawar and Kashmir, stringent measures to prevent the contamination of these articles of food were taken and the outbreak was brought under control.



At the beginning, great difficulty was experienced in dealing with the epidemics in consequence of the non-receipt of early intimation of the outbreak of the disease in rural circles. The Civil Surgeons were instructed to bring this defect to the notice of the District Authorities, but as this did not produce the desired effect Government was approached and a communication on the subject to the Deputy Commissioners improved matters considerably. In the Muzaffargarh District the Lambardar and Chaukidar who failed to report a case of cholera were fined Rs. 5 and Rs. 2, respectively.

The outbreak originated in Attock chiefly from Kohat and Thal and at Rawalpindi from that side and also from Peshawar. The spread in Rawalpindi District was due to a fair at Kalian Awan and from Rewat where a cattle market was held every week, this was stopped soon after this fact was discovered. Hardwar was responsible for imported cases at Ambala, Jagadhri, Amritsar, Gujrat, Muzaffargarh town and Tikka Nagrota (Kangra District). In a few of them a small localised epidemic followed.

A short outbreak in August and September in several towns in the central Punjab such as Jullundur and Amritsar was the result of Amawas Fair at Tarn Taran (Amritsar District).

Large as the total of 8,554 deaths may seem it is a mere bagatelle compared to the totals returned by our next door neighbour, the United Provinces. For reasons which at present may be described as indefinite Cholera is one of the few diseases which does not do things on a grand scale in the Punjab and when our projected establishment of District Health Officers is complete it will probably trouble us even less than it does now. But so long as Hardwar is permitted to remain a disseminating focus we shall always be at the mercy of the factors which make "a good year" for Cholera. The Imperial Government is giving a special grant for the sanitation of Puri and it is to be hoped that some day Hardwar will receive the treatment necessary to prevent its being the public danger it is at present.

23. The small-pox epidemic was widespread at the end of the previous year and continued to increase in 1919 till the month of June when it attained its maximum intensity—2,717 deaths being reported during the month. In July the disease declined and the number of deaths fell to 1,863. The lowest number reported in any month of the year was 360 in October, but from that month onwards it began to increase, 723 deaths were returned in November and 1,418 in December. Small-pox claimed 15,365 victims during the year against 3,032 in 1918 representing annual ratios of 0.79 and 0.16 *per mille* respectively, against the quinquennial average of 0.12 *per mille*. The mortality was higher than in the last five years and no district was free from the disease. The last epidemic of a similar nature was in 1912 and 1913 when 30,339 and 38,687 deaths occurred. Of the deaths registered under this head 3,848 were under one year of age and 7,862 from one to ten years of age as against 725 and 1,707, respectively, in the previous year. This means that nearly two-thirds of the deaths which occurred from small-pox were among children under ten years of age and points to neglect of infantile vaccination. The proportion of male to female deaths from small-pox was nearly equal, the rates in 1919 being 0.76 in the case of males and 0.83 in that of females as against 0.14 and 0.17 in the year preceding.

The mortality rate from small-pox was as high as 2.64 *per mille* in Montgomery District, 2.17 in Hoshiarpur, 1.83 in Ferozepore, 1.71 in Jhelum, 1.32 each in Hissar and Lyallpur, 1.24 in Ludhiana and 1.23 in Lahore; while in the remaining districts it was below the provincial rate of 0.79. The lowest rate recorded was 0.03 in Muzaffargarh and Dera Ghazi Khan.

The death rate from small-pox in urban areas was 1.33 as compared with 0.74 in rural circles, and the average rate for towns in which the compulsory Vaccination Act is in force was 1.14 as against 1.17 in the previous year.



Out of 145 towns in this province 18 remained free from small-pox against 68 during the previous year. The highest rates were recorded in Una 8.38, Chiniot 8.31, Phillour 7.66, Pattoki Mandi 7.45, Muktsar 6.91, Garhdiwala 6.79, Gujranwala 5.59, Ramnagar 5.52, Mukerian 5.36 and Anandpur 5.20. In all these towns except Muktsar and Gujranwala vaccination is not compulsory.

In the beginning of the year a general letter was issued to the Civil Surgeons and Health Officers recommending special measures to prevent the spread of the disease, and when it was noticed that deaths from small-pox were still being returned in almost all the districts the attention of the Civil Surgeons was again drawn to the possibility of a severe epidemic in the province in the approaching winter. They were also asked to take active steps to promote vaccination and re-vaccination especially in the invaded areas and to see that the local bodies engaged temporary additional vaccinators to cope with the extra work. In addition all the important centres of infection were visited by me and the Additional Deputy Sanitary Commissioner and advice and assistance given. The Civil Surgeons and Health Officers with the co-operation of the District Authorities did their best to combat the spread of the disease.

Petten-koffer is credited with the classical remark that for every death from Typhoid Fever some one ought to be hanged, but the remark is much more applicable to small-pox. Vaccination is a simple and effective safe-guard against the disease, but numbers of parents refuse to give their children the benefit of the measure. When a sufficiently large un-vaccinated population has accrued, small-pox breaks out and compulsory immunisation of a type very different to that of vaccination is enforced by nature. Having done its work small-pox retires until natural compulsory immunisation again becomes necessary. For the years 1918-19 the deaths from small-pox totalled 18,397, and putting the case mortality at 10 per cent. this means that 183,970 people were subjected to natural compulsory immunisation. The epidemic, however, is by no means over, and many of the deaths are returned under other headings. By the time the epidemic is over I calculate that between a quarter and half a million people will have been infected. In the last Report I tabulated the chief preventable factors in our epidemic of small-pox and Government has taken action on the points raised. Much, however, remains to be done :—

- (1) The District Staff requires to be increased to a minimum of two per tahsil.
- (2) Local bodies should be under compulsion to employ extra staff at once when instructed to do so and should not be permitted to waste months arguing about the necessity for the measure.
- (3) The full complement of District Health Officers should be obtained as rapidly as possible and vaccination operations removed entirely from the control of Civil Surgeons.
- (4) The Vaccination Act is a feeble, ineffective measure which requires drastic amendment.
- (5) Vaccination should be made compulsory throughout the Province

**24. Plague.**—The Chief Plague Medical Officer has furnished the following report :—

The total number of plague cases and deaths in the Punjab during 1919 was 16,507 cases and 12,683 deaths, of which 14,616 cases and 11,039 deaths occurred in British districts and 1,891 cases and 1,594 deaths took place in Native States.

These figures have only been lower on two occasions during the past ten years, as is shown in the subjoined statement.



Comparative statement of total plague cases and deaths and case mortality for the past ten years.

| Year. | BRITISH DISTRICTS. |         | NATIVE STATES. |         | TOTAL.  |         | Cases<br>Mortality. |
|-------|--------------------|---------|----------------|---------|---------|---------|---------------------|
|       | Cases.             | Deaths. | Cases.         | Deaths. | Cases.  | Deaths. |                     |
| 1909  | 41,985             | 35,655  | 12,436         | 9,409   | 54,421  | 45,064  | 82.8                |
| 1910  | 152,769            | 135,529 | 45,201         | 34,338  | 197,970 | 169,867 | 85.8                |
| 1911  | 190,948            | 175,668 | 28,473         | 23,001  | 220,411 | 198,669 | 90.1                |
| 1912  | 35,486             | 29,850  | 6,928          | 5,273   | 42,414  | 35,123  | 82.8                |
| 1913  | 21,469             | 17,904  | 3,366          | 2,327   | 24,835  | 20,231  | 81.4                |
| 1914  | 76,269             | 64,077  | 11,836         | 9,550   | 88,105  | 73,627  | 83.5                |
| 1915  | 264,871            | 222,080 | 27,879         | 22,024  | 293,750 | 244,104 | 83.0                |
| 1916  | 4,242              | 3,325   | 1,030          | 826     | 5,272   | 4,151   | 78.7                |
| 1917  | 13,225             | 9,031   | 784            | 693     | 14,009  | 9,724   | 69.4                |
| 1918  | 124,590            | 95,742  | 20,695         | 18,734  | 145,285 | 114,476 | 78.7                |
| 1919  | 14,616             | 11,089  | 7,891          | 1,594   | 16,507  | 12,683  | 71.2                |

*Type of disease.*—The bubonic type of the disease alone prevailed though small localized outbreaks of pneumonic and septicaemic plague occurred in eight districts. In addition to being mild incidence some reports refer to the disease being relatively benign in character.

The case mortality was 71.2 per cent., which is the lowest figure reached (except for the year 1917) during the past ten years. This fact combined with the relatively low case mortality during the past four years may possibly indicate a slight decline in the virulence of the disease.

*Distribution.*—The plague infected area in 1919 was in the main the area infected in the preceding year. Thus in January 1919 human plague was still present in the districts of Hissar, Rohtak, Ferozepore, Lahore, Gujranwala, Jhelum, Rawalpindi, Montgomery, Lyallpur, Multan. These districts experienced the worst effect of the epidemic in 1919, the four most severely infected districts being Rohtak (3,228 deaths); Lahore (1,611 deaths); Ferozepore (1,162 deaths); Montgomery (894 deaths). The Patiala State reported 1,083 deaths and Jind State 325 deaths.

Small foci of infection appeared in all the remaining British districts with the exception of Simla, Kangra, Muzaffargarh and Dera Ghazi Khan which remained free from endemic plague throughout the year.

*Seasonal Variation.*—Plague exhibited its usual seasonal variation in prevalence. After a period of relative or absolute quiescence during the winter the disease commenced to recrudescence in January and February, the districts in which the disease had not completely died out at the end of 1919 being primarily involved. In March the disease assumed epidemic proportions and it reached its maximum intensity in April and May; during June it declined rapidly in all districts with the exception of the districts of Montgomery and Attock, in the former of which the disease prevailed until September. The autumnal recrudescence commenced in September, but out of 23 districts infected in the previous June the disease only reappeared in two cities and in five districts, *viz.*, Rawalpindi city, Multan city and the districts of Rohtak, Gujranwala, Jhelum, Attock and Lyallpur. The epidemics in the cities of Rawalpindi and Multan were the most conspicuous feature of the last three months of the year both by reason of their severity and of the fact that they constituted diffusion centres whence infection spread into plague-free areas.

*Anti-Plague Measures.*—The history of plague during the past year abundantly justifies the continuance of the policy of endeavouring to stamp out the disease by means of systematic rat destruction, during the plague-free season, in the areas infected late in the previous season, and particularly in the areas where human plague or rat mortality continues throughout the hot weather.

A special effort was made on these lines under the supervision of Lieutenant-Colonel A. W. T. Buist, I.M.S., Civil Surgeon, Rawalpindi, and Dr. Thakor, the Health Officer, Rawalpindi city, and K. B. Diwan Ali, M.B.E., Civil Surgeon, Multan, with the assistance of Mr. Deeks, the Secretary of the Municipal Committee, Multan, to rid the cities in their respective charges of infection. In Rawalpindi City an effort was made in the early autumn to cleanse and disinfect the whole city, to carry out an intensive campaign of rat destruction, by means of poison (barium carbonate), by rat trapping and by "smoking" operations. These efforts were attended with some measure of success although the disease was not completely controlled.



In other infected districts the areas infected late in the previous year were dealt with on similar lines, a special effort being made to obtain early reports of rat mortality and human plague and to deal promptly with them.

In the presence of an outbreak of plague villages were usually evacuated and anti-plague inoculation was readily resorted to where the outbreak was severe. The value of these measures is now so well-known that no further reference is necessary in regard to them.

During the year 12,994 anti-plague inoculations were performed, of which 2,698 were carried out in Multan city, 2,141 in Rohtak District, 1,789 in Jullundur District, 1,396 in Montgomery District and 1,196 in the city of Rawalpindi.

*Staff.*—In the beginning of the year no commissioned officers, Assistant Surgeons or Sub-Assistant Surgeons were available for plague duty, their place being taken by 41 Plague Supervisors, most of whom are qualified Sanitary Inspectors. In August 1919 20 Assistant Surgeons were recruited for plague duty, the services of 18 Plague Supervisors being at the same time dispensed with. At the close of the year the staff consisted of 14 Assistant Surgeons, 2 Sub-Assistant Surgeons and 20 Plague Supervisors.

This staff, working under the orders of the Civil Surgeon in each district, in addition to carrying out their duties in connection with anti-plague operations, performed useful services in connection with outbreaks of cholera, influenza, malaria and small-pox; they also administered a considerable amount of medical relief in rural areas. Assistant Surgeons treated 11,279 cases and Sub-Assistant Surgeons 164 cases, making a total of 11,443 cases of sickness treated by the Medical Staff on plague duty.

*General Remarks.*—It would be premature at present to conclude that plague is on the wane in the Punjab, although recent events suggest that the disease has died out in many districts. The main disquieting feature in the situation is the fact that plague is still active in two important cities and in view of the sanitary conditions prevailing, particularly in rural areas, a constant danger of re-infection exists.

*Administration.*—The post of Chief Plague Medical Officer was held as a collateral charge by the Inspector-General of Civil Hospitals from January 1st, 1919, until Major C. E. Southon, I.M.S., reverted from military duty on 15th February 1919, and again from 21st May 1919 when this officer was again transferred to the Military Department until September 29th, 1919, when Lieutenant-Colonel C. A. Gill, I.M.S., Chief Malaria Medical Officer, was appointed Chief Plague Medical Officer as an additional charge.

25. **Fevers.**—The year 1919 was, on the whole, a healthy one from the point of view of "fevers," the total number of deaths recorded under this heading being 365,045 (equivalent to a death rate of 18·88 *per mille* of population) as against an average number of "fevers" deaths of 350,000 during the past 50 years (omitting 1918 on account of Influenza).

The term "fevers" embraces many diseases in addition to malaria. It includes a certain proportion of death from relapsing fever, pneumonia, enteric fever and other febrile diseases of uncertain origin.

The incidence and severity of Malaria is, however, indicated with approximate accuracy in the absence of Influenza by the number of "fever" deaths occurring in the months of October and November. These deaths numbered, in the year under review, 79,183, as compared with an average of 61,373 during the period from 1901-1917.

The influence of malaria on the public health is shown in the following table, where the relatively low "fever" death rate, low infantile mortality rate and a birth rate of average proportions,—all indicate the favourable condition of affairs prevailing in 1919—

| Punjab.   |     |     |     | Birth-rate. | Fever death rate. | Infantile mortality rate. |
|-----------|-----|-----|-----|-------------|-------------------|---------------------------|
| 1919      | ... | ... | ... | 40·3        | 18·88             | 187·3                     |
| 1891—1910 | ... | ... | ... | 40·1        | 22·41             | 239·7                     |

The fever death rate of districts (towns and rural areas) was 18·88 as compared with 22·41 during the period 1891-1910. The districts exhibiting the highest "fever" death-rate were Gurgaon (25·25 *per mille*); Karnal (24·94 *per mille*); Ambala (21·45 *per mille*); Kangra (21·35 *per mille*); Mianwali (21·22 *per mille*); Montgomery (22·37 *per mille*) and Muzaffargarh (22·94 *per mille*).



The fever death rate was slightly higher amongst females than amongst males being 19·77 *per mille* in the former as compared with 18·14 *per mille* in the latter.

The urban fever death rate in 145 municipal towns was 15·50 *per mille*, the towns showing the highest fever death rate being as follows :—

| District.       | Town.       | Fever death rate. |
|-----------------|-------------|-------------------|
| Gurgaon         | Palwal      | 28·47             |
|                 | Pirozpur    | 21·83             |
|                 | Hodal       | 24·14             |
|                 | Ballabgarh  | 25·41             |
|                 | Faridabad   | 30·76             |
| Karnal          | Karnal      | 26·36             |
|                 | Kaithal     | 22·54             |
| Hoshiarpur      | Dasuya      | 24·46             |
|                 | Tanda Umar  | 21·09             |
|                 | Mukerian    | 24·84             |
| Lahore          | Baghbanpura | 23·03             |
|                 | Pattoki     | 23·94             |
| Gujranwala      | Gujranwala  | 24·09             |
|                 | Chuharkana  | 37·47             |
| Gujrat          | Gujrat      | 21·56             |
|                 | Kunjah      | 22·14             |
| Mianwali        | Bhakkar     | 29·69             |
|                 | Kalabagh    | 27·80             |
| Montgomery      | Pakpattan   | 21·87             |
| Multan          | Shujabad    | 22·10             |
| Muzaffargarh    | Leiah       | 24·47             |
|                 | Karor       | 24·55             |
| Dera Ghazi Khan | Rajanpur    | 34·02             |
|                 | Kot Mithan  | 22·02             |

The fever death rate in the most important cities was—Lahore 17·66 *per mille*, Amritsar 14·87 *per mille*, Jullundur 11·78 *per mille*, Sialkot 11·83 *per mille*, Rawalpindi 18·78 *per mille*, and Multan 14·86 *per mille*.

The fever death rate in rural circles was 19·22 *per mille*, being higher by 3·72 *per mille* than the corresponding figure in the case of towns. Gurgaon District again exhibits the highest fever death rate (25·96 *per mille*) whilst in Karnal District the fever death rate of rural circles was 25·57 *per mille*. It was also relatively high in rural areas, in Ambala 22·32 *per mille*, Gujranwala 23·83 *per mille*, Montgomery 22·63 *per mille*, Muzaffargarh 23·01 *per mille*. The monthly incidence in the "fever" deaths exhibited no unusual feature. The months of October and November exhibited the largest number of "fever" death, whilst a smaller rise took place in the months of May and June.



The only areas where autumnal malaria attained epidemic intensity (though in a mild degree) were in the eastern part of Gurgaon District, Raipur Rural Circle in Ambala District, Mukerian Rural Circle in Hoshiarpur District and the rural circles of Malanwala and Moga in Ferozepore District.

The spleen census of school children under 10 years of age was carried out as usual in the months of June and November with the result that, of 43,919 children examined in 1919, the spleen-rate was found to be 10.1 per cent., as compared with 12.1 per cent. in November 1918, when 45,905 children were examined.

These rates compare favourably with those found in the previous year when the spleen-rate in June and November 1918 was 16.7 per cent. and 12.3 per cent., respectively.

26. There being a probability of a recrudescence of Influenza in the spring, arrangements were made to organise measures to prevent as far as possible its spread in the province, but fortunately it did not assume an alarming aspect during the year. The province was free from influenza until a single sporadic case, ending in complete recovery, was reported on 2nd August from Lahore Municipality. During the period from August to December reports of alleged outbreaks of influenza were received from Simla, Kangra, Ludhiana, Gujrat, Jhelum, Dharmpur, Rawalpindi, Attock, Mianwali, Muzaffargarh and Dera Ghazi Khan Districts, but on enquiries most of these outbreaks proved either Sandfly fever, Catarrhal fever, Pneumonia or Pneumonic Plague. Towards the end of the year there was a mild outbreak of Influenza at Bishop Cotton's School, Simla. There were in all 26 cases but none ended fatally. The entire school was inoculated by the Civil Surgeon, Simla East, with the vaccine when 16 cases had occurred and after that ten more cases occurred and the outbreak ceased. The mortality from "Fever" and "Respiratory Diseases" was somewhat higher than in the year preceding the epidemic of Influenza and it is probable that this excess mortality may be attributed in some degree to Influenza. Throughout autumn and the beginning of winter severe Catarrhal cold seemed to be more prevalent than usual in many districts of the province and a proportion of these may have been true influenza of a mild type.

In the Kangra District Influenza was first reported in Kulu during November and still continues but no death has been reported. Nurpur and Hamirpur Tahsils were also infected.

A sharp outbreak of Influenza was reported from Lahore Cantonment in October. The disease was mostly confined to Labour Corps. The deaths till the end of the year amounted to 267. It is noteworthy that the Civil Station and city of Lahore remained unaffected.

Another severe outbreak of Influenza in the villages of Shinka and Nartopa in the Attock District was reported, but the Chief Plague Medical Officer, Punjab, who investigated it came to the conclusion that it was Pneumonic Plague. In order to arrive at correct diagnosis the Civil Surgeons and Health Officers have since been instructed to take two slides of the sputum from each patient with symptoms and signs of Pneumonia or Pneumonic Plague and send them to the Bacteriologist to Government, Punjab, for examination and report.

It is interesting to note with reference to the immunity conferred by an attack of Influenza, that in the Muzaffargarh District the disease appeared as a local outbreak in 4 villages causing 199 cases with 70 deaths, and an enquiry showed that the majority of the victims during the year under report suffered from Influenza in the previous epidemic.

27. In March an outbreak of Influenza was reported from village Geehar in the Karnal District and thereafter it was further reported by the Civil Surgeon that a febrile disease had broken out in various villages in his district. The Additional Deputy Sanitary Commissioner visited these areas and took blood films from these cases during the febrile period. The symptoms and examination



of blood films proved that the cases were of Relapsing fever. Altogether 1,232 cases and 359 deaths occurred during the year. A general leaflet describing measures capable of limiting the spread of Relapsing fever was drawn up and English and Urdu copies were sent to all Civil Surgeons and Health Officers in the Punjab for distribution. The disease was also reported from 3 other districts Rohtak, Ambala and Simla. In Simla it was imported by a Mochi from Karnal. Altogether 60 cases occurred mostly in Mochis and later on a few in Kashmiri coolies. The Health Officer took every possible step to combat the disease relying chiefly on disinfection of houses, clothing, and bedding for the destruction of lice. The Health Officer reports that this was a considerable undertaking, as the only large disinfector suitable for the purpose is at Tara Devi Plague Post over 5 miles away. All contacts and their effects had to be transported to this post in rickshaws. He emphasises the absolute necessity of a properly equipped disinfecting station for Simla as the old bazar disinfector has long since been out of action, and a new high pressure disinfector is urgently required to avoid the wasteful, inconvenient, and cumbersome procedure now adopted in sending contacts with their clothing and bedding to Tara Devi for disinfection.

8. In Simla 35 cases were notified from Enteric fever, 28 among Europeans and 7 among Indians, as against 22 in 1918.

Enteric fever. These occurred in various parts of Simla and the enquiries made failed to disclose any common factor in their causation. The cases were diagnosed for the most part on clinical evidence and were mostly notified as Paratyphoid. During the year 3 cases of Typhus fever in Simla were returned but the source of the infection was not traceable.

In the Criminal Tribes Settlement at Dhariwal (Gurdaspur District) 29 cases occurred during the months of March, April and May of which one proved fatal; the patient developing double Pneumonia. The infection in the first case was probably introduced from Dhariwal bazaar where these labourers in the mill generally go during their meal hour. As soon as the report of the outbreak was received by the Civil Surgeon he proceeded to the spot and applied preventive measures.

29. In December the Civil Surgeon, Amritsar, reported the existence of a case resembling sleeping sickness in its clinical features. The case was visited by the

Encephalitis lethargica. Additional Deputy Sanitary Commissioner and appeared to be one of Encephalitis Lethargica. In conjunction with the provincial bacteriological laboratory it was investigated and the possibility of sleeping sickness definitely excluded. The symptoms being identical with those of Encephalitis Lethargica reported from Karachi the case was diagnosed accordingly. Other cases followed and the little outbreak ceased in February with a total of 12 cases of which 5 proved fatal. The points of interest in connection with this little outbreak are—

- (1) No connection with the outbreak at Karachi could be traced. The disease apparently occurred spontaneously.
- (2) None of the patients had previously suffered from influenza and Amritsar was free of influenza at the time.
- (3) No connection between cases could be traced. The cases occurred in different parts of the town and in separate families.
- (4) It is impossible to reproduce the disease in rabbits and guinea pigs.

30. **Dysentery and Diarrhoea.**—The total number of deaths from Dysentery and Diarrhoea amounted to 8,639 as against 10,358 in the previous year, the rate being 1.45 and 0.54, respectively. The quinquennial average was 0.70. The provincial rate was exceeded in 10 districts but the excess was as usual most marked in Rawalpindi and Simla where the rate was 3.09 and 2.69, respectively. Of the remaining districts the rate recorded in Gurgaon was 0.70 and in Kangra and Gurdaspur 0.60 each and in other districts it did not exceed 0.58 while it was as low as 0.04 in Hoshiarpur.



The urban and rural rates were 1·65 and 0·33 as against 1·68 and 0·42 in the year preceding.

**31. Respiratory Diseases** — Diseases of the respiratory organs accounted for 37,813 deaths at a rate of 1·96 *per mille* which shows a decrease of 0·77 and 0·64 compared with the previous year and the average for the preceding 5 years respectively. The provincial rate was exceeded in 10 districts, but the excess was most marked in Gurdaspur where the rate was 6·38 followed by Kangra with 4·61 and Ambala 4·58. It was as low as 0·20 in Montgomery and Dera Ghazi Khan, 0·35 in Muzaffargarh and 0·55 in Jhang.

The urban rate was 5·32 and the rural rate 1·62, the corresponding rates for the previous year being 5·16 and 2·18.

**32. Injuries.** — There were 6,896 deaths due to injuries at a rate of 0·36 compared with 0·32 in the previous year and 0·36 the average for the preceding 5 years. The deaths were classified as follows :—

Suicide 261 (116 males and 145 females), wounds 781 (650 and 131), accidents 4,910 (2,947 and 1,963), snake-bite 736, injuries inflicted by wild beasts 66 and rabies 142.

**33. All other causes.** — The total number of deaths registered under the head "all other causes" amounted to 94,683 at a rate of 4·90 which is the lowest on record since 1871. The rate for the last year and the average for the preceding 5 years were 5·70 and 6·48 respectively. The highest rates were recorded in Gurgaon 10·4, Ludhiana 8·2, Rohtak and Karnal 7·3 and Simla 7·0, while very low rates were recorded in Dera Ghazi Khan 2·0, Muzaffargarh 2·1, Rawalpindi 3·1, Gurdaspur 3·5 and Hoshiarpur, Gujranwala and Attock 3·6.

**34. Rabies.** — During the year under report 1,810 patients from the Punjab underwent anti-rabic treatment at the Pasteur Institute at Kasauli as against 1,745 last year. All of these were Indians among whom there were 8 deaths and 6 failures and in addition 1 case is for various reasons still under enquiry. There were 177 cases in which either treatment was not considered necessary or subsequent events proved that they ran no risk.



### Section IX.—Sanitary Works.

35. The report on Sanitary Works during 1919, furnished by the Sanitary Engineer to Government, Punjab, is contained in Appendix B to this report.
36. The Deputy Commissioner, Ferozepore, reports that one hundred villages in his district were supplied with village sanitary note-books during the year under report.
37. As last year the District Board, Shahpur, agreed to give prizes to the two best villages in each tahsil for sanitary improvements, but no practical result was obtained during the year.
38. The number of wells cleaned and parapets constructed during the year rose from 5,615 in the previous year to 6,177 and of parapets constructed fell from 608 to 548 respectively. A sum of Rs. 49,222 was spent for this purpose and for the construction of new wells during the year showing a decrease of Rs. 34,687 compared with the previous year. A new well outside Ghushain gate, Hansi (Hissar District) is being sunk at a cost of about Rs. 800.
39. An income of Rs. 2,06,603 was derived from the sale of street sweepings in municipal towns during the year as against Rs. 1,44,265 in the previous year. The largest sums were realized in Sialkot, Lahore and Amritsar.
40. There were 1,556.19 acres of land under sewage irrigation in the principal towns and Rs. 44,828 were realized for its use during the year. There was an increase of 179.52 acres in land thus irrigated and a sum of Rs. 1,258 in the amount realized.
41. Few attempts have been made to improve village sanitation and not with any great zest. Rules for sanitation in certain selected villages were framed and sanctioned by the District Boards of Ambala, Ludhiana and Mianwali but they were not taken advantage of by the villagers and until the people themselves show some inclination towards improvement, it is hardly possible to help them.
- The District Boards of Lyallpur and Muzaffargarh have also prepared bye-laws in this connection which are said to be under the consideration of Government. It is gratifying to note that a separate Sanitary Inspector is employed by the District Board, Rohtak, to solely look after the sanitation of rural areas. In the Gurdaspur District the bazar of Dungala town was paved at a cost of Rs. 2,000 out of panchayat funds. Fifteen villages in this district maintain conservancy establishment at their own expense.
42. The conversion of Moga from a Notified Area to the status of a Municipality raised the number of municipal towns from 100 to 101 during the year 1918-19 and reduced the number of notified areas from 104 to 103. At the close of the year three new notified areas were constituted, viz., Mian Channu, Khanewal and Jahanian in the Multan District. The total income during the year, excluding opening balance of Rs. 36,73,713 and under head "Extraordinary" and debts amounting to Rs. 2,33,520, was Rs. 82,21,813. The total municipal expenditure on sanitation and vaccination was Rs. 22,32,978, as detailed below :—

|  | Rs.      |
|--|----------|
| (1) Water supply ... ..  | 4,10,885 |
| (2) Drainage ... ..  | 1,95,579 |
| (3) Conservancy, including establishment, road cleaning and watering, latrines, etc. ... | 8,70,622 |



|   | Rs.      |
|---|----------|
| (4) Health Officers and Sanitary Inspectors ... | 88,191   |
| (5) Vaccination ...                             | 25,723   |
| (6) Markets and Slaughter Houses ...            | 31,001   |
| (7) Roads ...                                   | 5,88,123 |
| (8) Burning and burial of paupers ...           | 9,151    |
| (9) Other sanitary requirements ...             | 13,708   |

The total income of District Boards excluding opening balance, amounted to Rs. 94,90,888 and the expenditure on sanitation and vaccination to Rs. 1,36,071.

The information regarding grants made for sanitary works is given in Appendix A appended to this report.

43. A list of works of public utility constructed during the year 1918-19, by private individuals at their own expense, is given below :—

Works of public utility by private individuals.

*Ambala Division—Hissar District.*—A pucca well at Patti at a cost of Rs. 2,000 by Karam Chand, Brahman, of Patti. A pucca well on road side of Rori-Sirsa Road at a cost of Rs. 1,200 by Lala Munshi Ram, Bhabra, of Rori. A pucca well in village Bhera at a cost of Rs. 825 by Lala Chandu Lal, son of Kannu Ram, Brahman, of Bhera. A pucca well in village Bahal at a cost of Rs. 1,000 by Ram Chander, son of Pokhar, Mahajan of Bahal.

*Rohtak District.*—A pucca well on Patti Kalan and Khanpore Kalan Road at a cost of Rs. 800 by Harphul Singh, Lambardar of Mahmudpore. A pucca well and a dharamsala on Barodha-Gohana Road at a cost of Rs. 700 by Kundan Lal, son of Ranjit, Hindu mason of Gohana. A pucca well on Murthal-Kutana Road at a cost of Rs. 200 by Kankoo, son of Sheo Lal, Mahajan of Tajpore. A pucca well and a dharamsala on Jakhauli Nagal Kalan Road at a cost of Rs. 450 by Mukhi, son of Murlidhar, Mahajan of Jakhauli. A pucca well and a dharamsala on Nangal Kalan-Baghat Road at a cost of Rs. 540 by Arjan Mal, son of Fhulloo, Mahajan of Jakhauli.

*Karnal District.*—A pucca well at Naguran at a cost of Rs. 2,500 by Buldeva, Brahmehari, of Naguran.

*Ambala District.*—A pucca well at Majra at a cost of Rs. 1,850, by Gobind, son of Sant Ram, Brahman, of village Majra. A pucca sarai on Ambala-Naraingarh Road near school at a cost of Rs. 7,325 by Harblas, son of Sri Ram, Bania, of Shahzadpore.

*Jullundur Division—Kangra District.*—A pucca well at Nagrota Bagwan on the Pathankot-Palampur Cart Road at a cost of Rs. 4,400 by Diwan Roda Mal, son of Diwan Hardiyal Singh, Mahajan of Kotla in Nurpur Tahsil. A pucca well in village Ghuryal in Dehra Tahsil at a cost of Rs. 600 by Musammat Panon, wife of Nihal Singh, caste Ghumar, of Chadiana village in Mauza Narihana of the Dehra Tahsil.

*Hoshiarpur District.*—A pucca well at Raju Majra village at a cost of Rs. 3,000 by Kirpa son of Naqubi, Gujjar of Raju Majra, Tahsil Garhshankar. A pucca well on Una-Anandpur Road near village Dakhli at a cost of Rs. 2,000 by Kirpa Ram, son of Kartar Singh, Rajput of Meghpar, tahsil Una. A pucca well on the Hariana-Sham Churasi Road near village Mirzapur, Tahsil Hoshiarpur, at a cost of Rs. 400 by Mussammat Chandkur, widow of Ghian Sunder, Nankria, of Amritsar.

*Ludhiana District.*—One pukhta well at village Bhasi, Tahsil Samrala, at a cost of Rs. 500 by Mangal Ram, son of Jiwan Ram, Brahman, of village Bhasi, Tahsil Samrala.

*Ferozepore District.*—A pucca well at Ladhuka at a cost of Rs. 225 by Nihal Chand, son of Chanda, Arora, of Ladhuka.

*Lahore Division—Lahore District.*—A dharamsala at Azamabad, Kot Haroo Shah, Tahsil Chunian, at a cost of Rs. 4,400 by Arjan Das, son of Kanhya Lal, Khatri. A mosque with a well at Mandi Kot Radha Kishen, Tahsil Chunian, at a cost of Rs. 4,000 by Qaim Din and Jalal Din, sons of Ilahi Bakhsh, Khoja. A takia for travellers at Ganja Kalan, Tahsil Chunian, at a cost of Rs. 300 by Muhammad Ali, Zaildar. A well for drinking purposes at Sarai Chhimba, Tahsil Chunian, at a cost of Rs. 300 by Bhai Kala Singh, Chela Bhai Nihal Singh, Sadh. A well for drinking purposes at Nantheh Khalsa, Tahsil Chunian, at a cost of Rs. 500 by Sultan Singh, son of Sulakhan Singh, Jat. A well for drinking purposes at Behrwai, Tahsil Chunian, at a cost of Rs. 500 by Sher Singh, son of Ganda Singh. Repairs of a destroyed well for drinking purposes at Bhanke Uttar, Tahsil Chunian at a cost of Rs. 250 by Kala Singh, son of Dan Singh, Jat.

*Multan Division—Lyallpur District.*—A well on Lyallpur-Lodhranwala Road at a cost of Rs. 650 by Bansi Lal and Ajudhia, sons of Daya Lal, of 117 J. B. A well on Lyallpur to Narwala Road at a cost of Rs. 1,400 by Sahib Singh, son of Jhakkar Singh, of 124 J. B. A well on Lyallpur to Lodhranwala Road at a cost of Rs. 1,000 by Sain Lasvi Shah of Lyallpur. A well on Jaranwala-Lyallpur Road at a cost of Rs. 700 by Indar Singh, of 65 G. B.

*Muzaffargarh District.*—A pucca well at Leiah at a cost of Rs. 300 by Loku Ram, Nangpal, of Leiah. A sarai on Got Chani Road in Alipur Tahsil at a cost of Rs. 300 by Thakar Bhawan Das, son of Thakar Megh Raj, of Alipur.



### Section X.

44. There were no changes in the superior personnel of the Department Administration. during the year under review.

I acted as Sanitary Commissioner; the post of Deputy Sanitary Commissioner was held as a collateral charge by Lieutenant-Colonel Mackenzie, I. M. S., acting for me as Professor of Pathology, King Edward Memorial Medical College; and Dr. K. A. Rahman continued to hold the post of Additional Deputy Sanitary Commissioner. The Department is severely handicapped by deficiencies in superior personnel and during the year the work, which was unusually heavy, was carried out with difficulty. The re-organisation of the Department had to be taken in hand; important questions of policy with regard to general sanitation and involving the ultimate expenditure of very large sums of money were before the Sanitary Board; and the Province suffered from a widespread epidemic of cholera. The usual inspections were carried out and owing to the cholera epidemic Dr. Rahman spent most of the hot weather on emergency touring. Lieutenant-Colonel Mackenzie in addition to his own duties, which are heavy, supervised the Vaccine Institute, discharged the office duties of Deputy Sanitary Commissioner, acted as Professor of Hygiene, conducted the Sanitary Inspector's class and during the College vacation assisted in the general work of inspection. This is heavy work for one officer—I speak feelingly having had four years' experience of it myself,—and the thanks of Government are due to Lieutenant-Colonel Mackenzie and Dr. Rahman both for their arduous work and the skill with which they overcame all difficulties. Some relief to the over-strained Department was given by the return of Assistant Surgeon, H. C. Phillips, Superintendent of the Vaccine Institute, from military duty, but as a counter entry my own office suffered a great loss in the sudden death of my Superintendent Mr. W. H. Mills. Mr. Mills joined the Department in 1906, was an invaluable Superintendent with special abilities for statistical work, and it was largely due to him that the Department was able to exist for three years during the stress of the War with the offices of Sanitary Commissioner and Deputy Sanitary Commissioner held as collateral charges. The death of Mr. Mills threw everything into confusion but the Inspector-General, Civil Hospitals, came to my aid, lent me and finally transferred to me Mr. Jennings, acting Superintendent of his own office.

The year 1919 will be memorable in the history of the development of Preventive Medicine in the Province as the year in which the foundations of a thoroughly sound structure were laid.

No student of Preventive Medicine could fail to be struck by the fact that in the matter of epidemics the Punjab usually suffers on an unprecedented scale. Epidemic plague visits India and the vital statistics of the Punjab become of world-wide interest; the malaria epidemic of 1908 stands out as a record; finally, Influenza visits us and the tale of 9,60,000 deaths in three months in a population of 19 millions is one which is never likely to be paralleled. In a Province with such a medical history "panic" measures are liable to be favoured to the detriment of sound principles, and this has certainly been the case in the Punjab. For Plague a Plague Department was created; for Malaria a Malaria Department, and for a time we were threatened with the creation of an Influenza Department. This policy may be made very attractive on paper, but it is radically unsound and I, for one, have never ceased to assail it. As I am never weary of pointing out England has taught the world the principles and practice of Preventive Medicine and, though there have been many paper attempts to show England that her principles and practice are rudimentary and faulty, such communities as have not fallen into line with her continue to display the fact in their vital statistics. But England never attained her present position by the creation of emergency departments and such like panic measures. The Punjab with its over-crowded insanitary towns, deficient medical personnel, using the term "medical" in the wider sense, lack of organisation and driving power in its Sanitary Department, and its top heavy, heterogenous collection of specialised departments had certainly strayed far from English principles. The time had come for a clean sweep and this was made in 1919.



English experience teaches us that the problem of epidemic disease can be attacked on two main lines—firstly, the provision of an adequate, properly qualified medical personnel and, secondly, the improvement of conditions of livelihood on broad sanitary lines—and the provincial policy has been reconstructed on these lines. In outline the policy adopted is as follows:—

*Medical personnel (Therapeutic).*—The minimum standard of one qualified medical practitioner per 100 square miles has been accepted by Government and assistance promised to the District Boards; standard plans for cheap rural dispensaries have been drawn up; and the principle of each rural medical officer being the medical officer of health for his beat accepted. As a corollary arrangements have been made for increasing the out-put from the Medical College and School, and the Punjab Medical Council has been given a fillip towards drawing up a standard medical curriculum.

*Medical personnel (Preventive).*—The number of Municipal Health Officers is to be increased and each district will be provided with a District Health Officer discharging the duties of an English County Medical Officer of Health, independent of the Civil Surgeon, and working under the District Board. As regards District Health Officers a start is to be made with the three selected districts of Gurgaon, Jullundur and Rohtak, Government bearing the entire cost for five years, and Government has offered to do the same for any other district wishing to employ a Health Officer.

#### SANITARY DEPARTMENT.

*Personnel.*—The reorganised department will consist of the Sanitary Commissioner and 9 Deputy Sanitary Commissioners distributed as follows:—

One for each of the 5 Revenue Divisions, three at head-quarters for technical services, and one as leave reserve. The existing Plague and Malaria Departments will be abolished and the personnel absorbed in the reorganised department. This scheme has been submitted to the Government of India for sanction and in the meantime the Plague and Malaria Departments are under orders for transfer to the Sanitary Department. When in working order the technical Deputy Sanitary Commissioners at headquarters will constitute epidemiological units for the investigation and eradication of epidemic disease, working as part of the Hygiene Institute; and each Divisional Deputy Sanitary Commissioner will be responsible for the supervision of all public health matters in his division.

The acceptance of this scheme by Government was mainly due to the helpful and sympathetic attitude of the Hon'ble Colonel MacWatt, C.I.E., Inspector-General of Civil Hospitals, who, after acquainting himself with the details of my scheme and examining the working of the existing organisation, gave me his whole-hearted support. Consequently Government, no longer perplexed by divided councils, was in a position to take immediate action.

*Material.*—Before leaving my post at the Medical College I had convinced Government of the necessity for severing its connection with the Pasteur Institute and adopting the King Edward Memorial Research Institute as the Provincial Bacteriological laboratory, and the proposal had gone to the Secretary of State for sanction. Shortly after my departure sanction was accorded and from January 1919 the Province has had its own Bacteriological laboratory the report of which for the first time appears in these pages. Comparison of this Report with that of the Pasteur Institute for previous years will show that my prophecy of a rapid expansion of work has been amply justified. The present Provincial Laboratory, however, was designed to meet the requirements of Therapeutic Medicine and for that reason was placed directly under the Inspector-General of Civil Hospitals, Punjab. At present it is of course affording invaluable assistance to this department, but it could not possibly hope to cope with our requirements, and I have always laid it down as a cardinal principle that to endeavour to meet the requirements of Therapeutic and Preventive Medicine on a large scale by a combined laboratory is unsound. Allowing for a certain and, I consider, desirable amount of over-lapping, the chemical, bacteriological, and epidemiological aspects of Preventive Medicine problems require a separate laboratory organisation, and being personally responsible for the existing medical laboratory organisation of the Province this principle has been carefully observed. The requirements of therapeutic medicine naturally come first, and it now remains to make good the deficiency in the domain of Preventive Medicine. This, I have every reason to believe, will shortly be accomplished by means of the Hygiene Institute. Government has approved in principle of this Institute, but the detailed scheme has yet to be examined. Here it is only necessary to state that the Institute will perform the following functions:—(1) Provide for the chemical, bacteriological, and epidemiological study—routine and investigatory,—of Preventive Medicine problems. (2) Provide epidemiological units and the necessary trained subordinate personnel. (3) Train public analysts required under the Punjab Prevention of Adulteration Act. (4) Give a complete course of instruction for the Provincial D. P. H. (5) Give the course of instruction for the Sanitary Inspectors' certificate. (6) Incorporate the existing Vaccine Institute. Owing to existing loose terminology it is also necessary to clearly state that the Institute will not be a post-graduate school of Tropical Medicine. The constitution of any such school is the function of the Medical College and the Hygiene Institute will be designed to prevent any possibility of encroachment on the functions of that body.



45. In the last report I referred to the necessity for the creation of Improvement Trusts to deal with Town Improvements and Town Planning in our overcrowded insanitary towns. In the year under report I submitted a note on the subject to Government which was referred to a strong Sub-Committee of the Sanitary Board for consideration. The Committee unanimously reported in favour of such Trusts and a Bill will be introduced into the Legislative Council to give effect to the Committee's recommendations.

This is a great advance and one which will ultimately prove to be of incalculable value to the province, as without the machinery of Improvement Trusts it is impossible to deal with the existing state of affairs.

The outline sketch given here will justify, I think, the opening statement that the foundations of a thoroughly sound structure have been laid. Much in the way of building on the foundations remains to be done, but provided administrators recognise that progress in Preventive Medicine is relatively slow and resist appeals to fritter away money on panic measures the structure will be steadily completed.

46. Civil Surgeons made 135 inspections of towns and 1,416 of smaller towns and villages during the year as against 156 of towns and 1,553 of villages in 1918. Assistant Surgeons inspected 38 towns and 350 smaller towns and villages as compared with 25 and 265, respectively, in the previous year.

47. Although malaria was not extensively present during the year ample steps were taken by local bodies for the free distribution of quinine in most of the districts in the Punjab through different agencies. Quinine in tablet form was also largely distributed by Government to the very poor through Co-operative Societies and Missionary and other philanthropic bodies.

48. It was not possible to do much in the way of filling up depressions owing to financial stringency, but in some towns and districts gangs were employed for the purpose notably in Rohtak, Ambala, Jhelum, Montgomery, Lyallpur and Muzaffargarh.

49. The Deputy Sanitary Commissioner remained *ex-officio* Professor of Hygiene of the King Edward Medical College, Lahore, throughout the year and delivered the prescribed course of lectures and demonstration on hygiene to the M.B., B. S. Class.

50. The usual classes for the instruction of the District Vaccinators in Elementary Hygiene at the Punjab Vaccine Institute were resumed in the last two months of the year. In the early part of the year Vaccinators were busy making up lee-way after the Influenza Epidemic and the classes could not be held.

51. The Municipalities of Ludhiana, Sialkot and Multan were again unable during the year to secure the services of qualified Health Officers. This subject was referred to in the last Report and since then Government has taken steps to remedy the position. The difficulties in the way of obtaining Health Officers are two—

(1) Insufficient pay and status.

(2) Dearth of qualified Officers.

Government has now removed the first difficulty and measures are in hand to deal with the second.

52. An "Education Bureau" to provide standard lectures, lantern slides, diagrams, etc., has been budgetted for and approved of by the Financial Committee of the Legislative Council.



53. The towns of Mian Channu, Chichawatni Road, Khanewal and

Formation of new towns in the vicinity of the North-Western Railway.

Jahanian which were stated to be under construction last year have not yet been completed. New mandis at Montgomery and Okara are also in course of construction. The scheme for the proposed new mandi at Montgomery was not sent up to the Sanitary Commissioner for criticism, but on my visit to that place in January 1919 I inspected it and communicated my views on its general lay-out in a note to the Commissioner, Multan Division. The Financial Commissioner was also supplied with the views of the Sanitary Commissioner on the general lay-out of the Okara Mandi on a reference made by him. A new village of Gunj is also being built near Lahore Cantonment East to replace the old one near the same station.

54. As the Provincial Laboratory of the Punjab the King Edward VII

Work of the Provincial Laboratory.

Memorial Research Institute, Medical College, Lahore, reported on specimens and did much work in connection with the preparation and issue of vaccines as noted below. In addition the Laboratory assisted in the investigation of Relapsing Fever in the Karnal District, Encephalitis Lethargica in Amritsar, and the general question of shaving brush Anthrax. It is worthy of note that although a large number of brushes from all over the Province were examined none of the brushes was infected :—

|  |     |     |       |
|--|-----|-----|-------|
| (i) Blood examinations                   | ... | ... | 1,781 |
| (ii) Bacteriological examinations        | ... | ... | 828   |
| (iii) Tumours and Histological specimens | ... | ... | 94    |
| Total                                    | ... | ... | 2,703 |

Sources of specimens sent for examinations :—

(i) Blood examinations :—

|   |     |     |       |
|---|-----|-----|-------|
| (a) From the Mayo and Albert Victor Hospitals | ... | ... | 542   |
| (b) From Civil Surgeons, etc.                 | ... | ... | 1,239 |
| Total   | ... | ... | 1,781 |

(ii) Bacteriological examinations :—

|   |     |     |     |
|---|-----|-----|-----|
| (a) From the Mayo and Albert Victor Hospitals | ... | ... | 338 |
| (b) From Civil Surgeons, etc.                 | ... | ... | 490 |
| Total   | ... | ... | 828 |

(iii) Tumours and Histological specimens :

|   |     |     |    |
|---|-----|-----|----|
| (a) From the Mayo and Albert Victor Hospitals | ... | ... | 66 |
| (b) From Civil Surgeons, etc.                 | ... | ... | 28 |
| Total   | ... | ... | 94 |



## Details of various examinations :—

## (i) Blood examinations :—

| <i>Widal Reaction.</i>  | <i>Positive.</i> | <i>Negative.</i> | <i>Total.</i> |
|---|------------------|------------------|---------------|
| (a) B. Typhosus ...   | 113              | 194              | 307           |
| (b) B. Paratyph A. ...  | 2                | 259              | 261           |
| (c) B. Paratyph B. ...  | 1                | 260              | 261           |
| (d) B. Coli ...   | 273              | 133              | 406           |
| (e) B. Dysenteriae ...  | 0                | 8                | 8             |
| (f) M. Melitensis ...   | 11               | 111              | 122           |
| Wassermann Reaction ...   | 89               | 42               | 131           |
| Miscellaneous including<br>films for malaria, blood-<br>counts, differential and<br>total, examinations for<br>spirilla of relapsing<br>fever, etc. |                  |                  |               |
| Total ...   | 489              | 1,007            | 1,496         |

## (ii) Bacteriological examinations :—

|                                       |     |     |     |
|---------------------------------------|-----|-----|-----|
| (a) Sputa ...                         | ... | ... | 93  |
| (b) Urines ...                        | ... | ... | 102 |
| (c) Water samples ...                 | ... | ... | 35  |
| (d) Shaving brushes ...               | ... | ... | 76  |
| (e) Pathological discharges, etc. ... | ... | ... | 522 |
| Total                                 | ... | ... | 828 |

## (iii) Tumours and Histological specimens :—

|                                      |     |     |    |
|--------------------------------------|-----|-----|----|
| (a) Simple tumours ...               | ... | ... | 19 |
| (i) Malignant Tumours                | ... | ... | 30 |
| (1) Carcinomata                      | ... | ... | 22 |
| (2) Sarcomata                        | ... | ... | 3  |
| (3) Endotheliomata                   | ... | ... | 5  |
| (c) Other Histological specimens ... | ... | ... | 45 |
| Total                                | ... | ... | 94 |

|   |     |     |       |
|---|-----|-----|-------|
| Vaccines prepared ...                               | ... | ... | 181   |
| Anti-plague inoculation done                        | ... | ... | 27    |
| Anti-Influenza inoculation done                     | ... | ... | 110   |
| Doses of Vaccines issued                            | ... | ... | 2,805 |
| Patients treated with Tuberculin and other Vaccines |     |     | 158   |

In conclusion my thanks are due to Mr. Jennings who voluntarily assisted with the office work before taking over the post of Superintendent and to my Head Assistant, M. Maula Bakhsh, who carried on the work of Superintendent in addition to his own duties for three months.

LAHORE :

W. H. C. FORSTER, LIEUT.-COL., I.M.S.,

The 15th May 1920.

Sanitary Commissioner, Punjab.







## APPENDIX A.

### PROCEEDINGS OF THE SANITARY BOARD, PUNJAB.

I HELD the post of the Secretary throughout the year.

The Board met seven times during the year three times each in Lahore and Simla and once in Multan.

The balance of Rs. 3,73,399 left over from the grant made during 1918-19 was fully utilized.

The following is a detail of the grants sanctioned out of the balance of Rs. 3,73,399 :—

|  | Rs.             |
|--|-----------------|
| 1. Dinanagar Drainage Scheme ... ..  | 11,570          |
| 2. Slaughter house and female latrine at Kamalia ... ..                            | 1,512           |
| 3. Execution of drainage at Toba Tek Singh ... ..                                  | 4,250           |
| 4. Shujabad Drainage Scheme ... ..   | 1,715           |
| 5. Engine house at Handesra (Ambala) ... ..  | 10,190          |
| 6. Payment of certain streets in Naraingarh village ... ..                         | 234             |
| 7. Storm Water drainage and filling of depression in the town of Montgomery ... .. | 71,458          |
| 8. Lahore City Dhobi Ghat ... ..   | 15,500          |
| 9. Dasuya Safdarpur Drainage Scheme ... ..   | 6,985           |
| 10. Rohtak Drainage Scheme ... ..  | 1,04,305        |
| 11. Paving of drains and streets in the Bandala village ... ..                     | 4,000           |
| 12. Experimental tube well at the bank of Tongri ... ..                            | 3,063           |
| 13. Rupar Drainage Scheme ... ..   | 10,000          |
| 14. Gujranwala Water Supply Scheme ... ..  | 1,28,617        |
| <b>Grand Total</b> ... ..  | <b>3,73,399</b> |

A fresh grant of 4 lakhs was placed at the disposal of the Sanitary Board for allotment during 1919-20 and from this the following grants were made upto 31st December 1919 leaving a balance of Rs. 3,42,532-12-0 which will be accounted for in the next year's report :—

|  | Rs.           | A.       | P.       |
|--|---------------|----------|----------|
| 1. Pind Dadan Khan Water Supply ... ..                     | 258           | 0        | 0        |
| 2. Ambala Water-Supply Scheme ... ..                       | 5,190         | 0        | 0        |
| 3. Gurdaspur Drainage Scheme ... ..                        | 482           | 0        | 0        |
| 4. Improvement of 3 villages in the Rohtak District ... .. | 17,523        | 0        | 0        |
| 5. Dera Ghazi Khan Water-Supply Extension Scheme ... ..    | 198           | 4        | 0        |
| 6. Dasuya Safdarpur Drainage Scheme ... ..                 | 598           | 0        | 0        |
| 7. Lahore Sewerage Scheme ... ..                           | 5,000         | 0        | 0        |
| 8. Killa Afghanan Drainage Scheme ... ..                   | 1,750         | 0        | 0        |
| 9. Dera Ghazi Khan Water-Supply Extension Scheme ... ..    | 8,152         | 0        | 0        |
| 10. Shujabad Drainage Scheme ... ..                        | 967           | 0        | 0        |
| 11. Purchase of books ... ..                               | 150           | 0        | 0        |
| 12. Sillanwali Drainage Scheme ... ..                      | 13,590        | 0        | 0        |
| 13. Ambala Water Supply Extension Scheme ... ..            | 3,599         | 0        | 0        |
| <b>Total</b> ... ..  | <b>57,467</b> | <b>4</b> | <b>0</b> |



The schemes noted below were approved by the Board and administrative sanction accorded in each case :—

|  | Rs.    |
|--|--------|
| 1. Dinanagar Drainage Scheme ... ..  | 23,141 |
| 2. Shujabad Drainage Scheme ... ..   | 18,782 |
| 3. Experiment in connection with Ambala Water-Supply Extension scheme ... .. | 10,190 |
| 4. Provision of a pump for Lahore Water-Supply Scheme                        | 90,000 |
| 5. Changar Mohalla Drainage Scheme (Lahore City) ...                         | 38,180 |
| 6. Dasuya Safdarpur Drainage Scheme ... ..                                   | 13,920 |
| 7. Simla Water-Supply Extension Scheme ... ..                                | 24,585 |
| 8. Improvement of 3 villages in the Rohtak District ...                      | 26,698 |

The Sialkot Drainage Scheme at an estimated cost of Rs. 3,44,100 was approved of by the Sanitary Board and submitted to Government in the Civil Department for administrative sanction which was accorded. The Board accorded revised administrative sanction to the schemes noted below :—

|   | Rs.    |
|---|--------|
| (1) Tandlianwala Water-Supply Scheme ... .. | 81,925 |
| (2) Shujabad Drainage Scheme ... ..         | 20,667 |
| (3) Sillanwali Drainage Scheme ... ..       | 86,000 |
| (4) Dasuya Safdarpur Drainage Scheme ... .. | 15,166 |

The Government in the civil department accorded revised administrative sanction to the Rohtak Drainage Scheme at a revised estimated cost of Rs. 2,08,610. The Government in the Public Works Department accorded technical sanction to the schemes noted below :—

|  | Rs.      |
|--|----------|
| (1) Rohtak Drainage Scheme ... ..                                  | 2,08,610 |
| (2) Acquisition and fencing of Chair Catchment Area ...            | 2,27,000 |
| (3) Through Mains ... ..   | 1,39,668 |
| (4) Extension of filters at Dhal ... ..                            | 83,490   |
| (5) Cherut Balancing Tank ... ..                                   | 26,957   |
| (6) Improvement to Weir at Chair and enlarging sedimentation tank. | 9,400    |
| (7) Tandlianwala Water-Supply Extension Scheme ...                 | 81,925   |

The constitution of the Board was decreased by one member, as the Secretary to Government, Punjab, Public Works Department, Irrigation Branch, ceased to be member of the Board with effect from 26th February 1919.

The Board is actively developing the general sanitation of the Urban Areas and now makes a practice of holding sessions in towns to discuss important questions with local representatives. This procedure is having an excellent educative effect and many misapprehensions have been removed in consequence. It further has the very desirable effect of bringing home to Municipal Committees that the Board is no mere academic institution. During the year one such session was held at Multan. In regard to technical matters the Board is proceeding on certain well defined lines of policy. The introduction of the Water Carriage System—the goal of all Sanitarians—is being carefully and skilfully regulated under Mr. Astbury's guidance, and a start on really modern lines has been arranged for in a selected portion of Lahore. Water supply problems have received much attention and in addition to financing most valuable experiments the Board has undertaken to finance others which have an important bearing on the general question. An outstanding example of the value of this policy is the water supply of Ambala. The problem is an extraordinarily difficult one but by his ingenious device of laying horizontal strainers in the bed of the Tangri river Mr. Astbury has undoubtedly found the solution. The Board financed the whole work as an experiment with the happy result that we are now in the position of putting down the pumping plant to deliver the water.

Arrangements for the detailed survey of our seven largest towns have been made and the work will be undertaken as soon as the Survey Department can supply the staff. The Board has further adopted the policy of "conditioning" grants-in-aid in order to secure the best results and bring Municipal Committees to a sense of their responsibilities. This policy is naturally not popular with Municipal Committees but it is in the best interests of the public health and in time will be productive of much good.



## APPENDIX B.

### ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT, PUNJAB FOR THE YEAR 1919.

THROUGHOUT the year the post of Sanitary Engineer to Government, Punjab, was held by Mr. A. R. Astbury, A.M.I.C.E., and that of Assistant Sanitary Engineer by Rai Sabib Dewan Amar Nath Nanda, B.A. The post of Personal Assistant to the Sanitary Engineer was sanctioned by the Local Government during the year and Mr. Dina Nath Gautam, B. Sc. (London), was appointed from 1st December 1919. The Sanitary Sub-Division has continued in the charge of Lala Lal Chand, Supervisor, and Lala Nand Lal, Overseer, has been attached to this Circle mainly in connection with experimental work and boring operations.

During the year the Sanitary Engineer visited Amritsar, Lyallpur, Chak Jhumra, Delhi, Jullundur, Rupar, Sargodha, Pind Dadan Khan, Khushab, Sangla, Simla, Rewari, Kalka, Kufri, Seog, Dharampur, Pathankot, Madhopur, Gurdaspur, Ambala, Sanawar, Multan, Chuharkana, Karnal, Rohtak.

In company with the Sanitary Commissioner the Sanitary Engineer was deputed by the Local Government to study the drainage and water supply systems of Bombay and Poona, and subsequently those of Delhi and Jammu. These visits have been invaluable in enabling him to keep in touch with the most progressive schemes in India.

The Sanitary Engineer was appointed by Government Member and Secretary of the Special Committee to deal with the larger schemes for the improvement of the Sanitary conditions of the town of Amritsar. The report of this Committee issued in January.

The Sanitary Engineer also served on a special Committee on the water supply of Simla whose report was issued in August. He has also served on Committees in connection with the allocation of Government sites in Lahore, and on the Gazetted Officers' Residences Estate, Lahore.

The Sanitary Engineer continued during the year to serve as Chairman of the Board of Examiners under the Punjab Steam Boilers and Prime Movers Act, and conducted two half-yearly examinations for the grant of certificates under the Act.

He also acted as Examiner in Minor Sanitary Engineering for the Sanitary Inspector's Annual Examination while the Assistant Sanitary Engineer delivered a course of lectures in this subject to the students of the Sanitary Inspector's Class.

The Sanitary Engineer has compiled notes on the Multan Drainage Schemes, "and the Water Supply of Rawalpindi," both of which have been printed and issued by Government. His report on the drainage of the Dasuya Tahsil of the Hoshiarpur District has also been printed and issued.

During the year the system has been started of keeping ledger files dealing with separate branches of sanitary practice. Over 100 files of this kind are now on record enabling the Sanitary Engineer's staff to have very ready and easy access to a large range of miscellaneous information. The difficulty of keeping touch with the many different schemes in the Province has led the Sanitary Engineer to compile concise histories of several schemes for ready reference. About 20 such histories, concerning water supplies are now on record. Special registers have also been commenced where records are kept in systematic order of all water analyses reported and of all borings made. These will afford great help in future in predicting the probable quality of water and yield from wells throughout the Province.

*Lahore Water Supply.*—The Davis Road tube well has been sunk and is working very satisfactorily yielding about 30,000 gallons an hour. The water is of good quality both chemically and from the bacteriological aspect. The Municipal Water Supply of Lahore has now as auxiliary sources of supply the following tube wells :—

|                 |     |     |     |                         |
|-----------------|-----|-----|-----|-------------------------|
| Ferozepore Road | ... | ... | ... | 17,000 gallons an hour. |
| Lake Road       | ... | ... | ... | 30,000 " " "            |
| Davis Road      | ... | ... | ... | 30,000 " " "            |
| Total           | ... | ... | ... | 77,000 " " "            |

During the month of June the independent tube wells supplied about 1-6th of the total municipal supply. The average daily quantity pumped during the month of June from all sources has been—

|      |     |     |     |                       |
|------|-----|-----|-----|-----------------------|
| 1916 | ... | ... | ... | 3.25 million gallons. |
| 1917 | ... | ... | ... | 3.42 " "              |
| 1918 | ... | ... | ... | 3.99 " "              |
| 1919 | ... | ... | ... | 5.37 " "              |

Six tube well strainers have been sunk at Balani Bagh in existing wells. There are now 17 tubes in the 23 wells, 12 are sunk in the 12 foot diameter wells and 5 in the 20 foot wells.



A new suction main has been laid at Badami Bagh to connect three of the wells of the original scheme of 1881 to the pumping station. This main relieves the old line of trench wells of the duty of conveying the water from the circular percolation wells to the engine house. The trench wells have been showing signs of failure for a long time past, and the new suction main should be extended so as to connect up all 5 of the old wells.

A second Hathorn-Davey vertical high duty pump to deliver 200,000 gallons an hour has been ordered by the Committee and will be erected in 1920.

In spite of the increased quantity pumped and the introduction of the three tube wells in outlying parts of the distribution system the supply is still intermittent and parts of the Civil Station are very badly served, both as regards quantity and pressure.

Bye-laws have been framed by the Municipal Committee of Lahore for the regulation of the water-supply system and were confirmed by the Local Government in Gazette Notification No 10164 of April 18, 1919.

*Lahore Sewerage Scheme.*—The Lahore Sewerage Scheme came under the full consideration of the Sanitary Board at their meeting of the 19th February, it was formally approved but for reasons brought forward by the Sanitary Commissioner the Board held that subject to an adequate water supply the scheme should be taken up gradually and with an educational object. The area selected for a commencement was to be one mainly inhabited by Indians. The Sanitary Commissioner and Sanitary Engineer submitted notes containing criticisms of the proposals to which the Board invited the attention of the Chief Engineer.

The Municipal Engineer, Lahore, and the Sanitary Engineer in consultation selected Anarkali and a part of Mozang, and the Sanitary Board made a grant of Rs. 5,000 to the Lahore Municipal Committee for payment to Messrs. Lane Brown and Hewlett for the preparation of a revised scheme in those areas to embody modifications suggested in a joint note by the Municipal and Sanitary Engineer.

*Lahore Storm Water Drainage.*—Storm water drains of Lawrence, Mozang and Thornton Roads have been completed resulting in greatly improved conditions in the vicinities of these roads during the rains. A few minor extensions of the surface drainage system have been carried out at a total cost of Rs. 5,873.

*Lahore Sewage purification plant, Government House.*—The sewage purification plant is being remodelled, and it is hoped that the defects in the present plant will be eliminated.

*Lahore. Water supply for the Chief Malaria Medical Officer and Chemical Examiner's Laboratories.*—It was intended to sink a tube well for the exclusive use of these buildings, but instead it has been decided to draw municipal water direct from the Mozang reservoir. The Laboratory for the Chief Malaria Medical Officer has not yet been constructed.

*Lahore. Draining the site of Gazetted Officers' Residences.*—The storm drainage scheme has been completed but an extension of it through the Lawrence Gardens remains to be done.

*Lahore. Combined Water Supply for Preparatory School, Queen Mary College.*—A 7-inch diameter tube well has been sunk and is working satisfactorily, water is slightly brackish but is better than that of the water in the main College grounds.

*Amritsar Dhobi Ghât.*—This is working satisfactorily. The Committee has provided Rs. 4,000 in next year's budget for construction of another similar Dhobi Ghât.

*Amritsar Sewerage.*—The main sewer from Dhab Sant Singh and Aitchison Park has been cleaned at a cost of Rs. 1,500 and the cleaning from Town Hall and storm water channel is in progress.

*Amritsar Drainage.*—Rs. 10,000 have been spent during the year on new drains and pavements of several lanes in the city.

*Bhira Drainage.*—This work was completed during the year 1918. Land compensation still remains to be paid by the Deputy Commissioner, Shahpur.

*Chiniot Drainage flushing arrangement.*—The work on the flushing tank was started but has been stopped because the soil at the site has proved unsuitable for the foundations. The work will be restarted when the revised estimate is sanctioned.

*Lala Musa Drainage.*—Estimated cost Rs. 74,541. Nearly completed.

*Lyallpur Water-Supply Extension*—Estimated cost Rs. 155,580. Expenditure to date Rs. 4,13,817. This work which has practically been completed comprise the following improvements and additions :—

- (1) Addition to storage accommodation.
- (2) Constructing an additional High Level Tank and 3 filter beds.
- (3) Constructing an additional clear water reservoir.



- (4) Widening the mill-race escape channel
- (5) New pumping plant (Worthington Horizontal driven by a Poncelet wheel).
- (6) Enlarging the rising main.
- (7) Enlarging two of the distribution mains.
- (8) Enlarging the feeding and draw off pipes of the storage tank and filter beds.

With the exception of item (5) these works have been completed. The pump was received in September 1919 and is now being erected. The plates of the Poncelet wheel were made  $1/16$ " by an oversight and are being replaced gratis by  $1/8$ " plates by Messrs. Worthington Simpson.

*Construction of retaining wall in the mill channel.*—Amount of estimate Rs. 2,915.

Expenditure to date Rs. 2561.

This wall is required to prevent the erosion taking place in the mill channel banks.

*Providing a scour pipe to the clear water reservoir.*—Amount of estimate Rs. 1,768.

A 4" scour pipe will be used to empty the clear water tanks for periodical cleaning. The water gravitates to the sump well from where it can be pumped into the escape channel.

*Raising of the walls of the storage tanks.*—Amount of estimate Rs. 6,963.

The full supply level of the Rakh Branch having been raised by 9" the height of the storage tank wall is being raised by the same amount to provide for the additional storage made available and to prevent the tanks overflowing.

*Special repairs to the High Level Tank.*—The tank was probably built on filling and settlement has taken place. It is intended to rebuild the cracked portion of the wall and to provide a floor of 3" cement concrete over the existing one.

*Rupar Drainage.*—Estimated cost Rs. 37,852.

Expenditure up to 31st December 1919 Rs. 43,523.

The work is completed with the exception of a part of the intercepting drain, regarding which there was some controversy as to the best alignment. This having been settled now the work should be completed without delay.

*Kalka Drainage.*—Expenditure to end of year was Rs. 35,278 against the sanctioned estimate for Rs. 36,531. The work has been completed according to the sanctioned estimate. A flushing arrangement will be provided by connection with the East Indian Railway pipe line.

*Rewari Water Supply—*

|                            | Rs.      |
|----------------------------|----------|
| Estimated cost ... ..      | 3,15,873 |
| Expenditure to date ... .. | 3,00,381 |

The trenching has been taken down to full depth and work on the masonry barrel for the suction main has been commenced. The special pipes that were lost on the Railway have been ordered afresh, lost a second time and ordered a third time. The painting of the reservoir has been completed. A ten inch strainer tube has been sunk in No. 4 well. The supply should be available to the public by the middle of May 1920.

*Jullundur City.*—Sinking a tube well in the Empress Gardens at—

|                            | Rs.    |
|----------------------------|--------|
| Estimated cost ... ..      | 7,092  |
| Expenditure to date ... .. | 10,753 |

The masonry well was completed and strainer and plain pipe lowered in position in September 1918. The casing pipe when being pulled out broke in the middle and lower half was left behind. Since then a series of mishaps has occurred. Efforts are now being made to extract the buried casing pipe out by means of a special tool, invented by the Workshop Foreman of the Bahawalpur State. After the casing pipe is pulled out and strainer exposed sand will be cleared from the inside and the upper portion of the plain pipe (which was removed) replaced in position. The engine sump will then be built and the engine and pump which are at site will be installed.

*Jullundur City.*—Trial boring in the proposed Police lines at—

|                            | Rs. |
|----------------------------|-----|
| Estimated cost ... ..      | 998 |
| Expenditure to date ... .. | 785 |

This is a 200 feet boring undertaken to ascertain the suitability of the subsoil for a tube well water supply for the proposed Police lines. Work was started in the beginning of October 1919 and completed by the end of December 1919.



The result is hopeful, a bed of good coarse water bearing sand over 60' in depth has been found. No special difficulties have been met with in this work.

*Dera Ghazi Khan water-supply extension.*—Estimated cost Rs. 1,85,708, expenditure to end of year Rs. 1,86,634. The work has been completed. No. 3 tube wells tends to clog but No. 4 is behaving fairly well in this respect.

*Shujabad Drainage.*—Estimate amounting to Rs. 15,302 has been sanctioned. The work is being arranged for by the Public Works Department departmentally as no contractor has yet come forward.

*Rohatak Drainage.*—The sanctioned estimate amounts to Rs. 2,08,610 and the local body have entrusted the work to the Public Works Department, Rs. 15,019 were spent by the Executive Engineer, Gurgaon Provincial Division, up to end of December 1919 in buying materials for the work. No construction work has yet been done. The levels have been checked.

The survey staff of this office has been fully employed on preparing sanitary schemes for local bodies.

The following rough and fair schemes for which survey and levelling was done were worked out in detail in this office.

*Preliminary estimates—*

|  | Rs.      |
|--|----------|
| (1) Sialkot Drainage Scheme ... ..                     | 3,44,133 |
| (2) Pasrur ditto ... ..                                | 3,955    |
| (3) Flushing arrangements at Pattoki Mandi ... ..      | 9,988    |
| (4) Paving and draining in new Mandi at Pattoki ... .. | 2,916    |
| (5) Sonapat Drainage Scheme ... ..                     | 1,09,091 |
| (6) Naraingarh Drainage Scheme ... ..                  | 10,104   |
| (7) Muktsar storm water Drainage Scheme ... ..         | 41,270   |
| (8) Lahore Cantonment Drainage Scheme ... ..           | 39,293   |
| (6) Gujranwala Drainage Scheme ... ..                  | 1,77,122 |
| (10) Trial boring at Chuharkana ... ..                 | 835      |

*Detailed estimates—*

|   |          |
|---|----------|
| (1) Panipat Extra-mural Drainage... ..  | 71,945   |
| (2) Hoshiarpur Drainage ... ..  | 2,10,141 |
| (3) Sangla Drainage ... ..  | 38,695   |
| (4) Special repairs to Hindu students' lavatory attached to Boarding House, Queen Mary College, Lahore ... .. | 2,623    |
| (5) Constructing Dhobi Ghât for Gazetted Officers' Residences at Lahore ... ..                                | 15,458   |

The total cost of the outdoor establishment, including draftsmen employed on the preparation of plans for the schemes, comes to Rs. 4,806 for the year. The project both rough and fair prepared by the Executive Engineers in the Public Works Department or local bodies that received technical approval of this office were 34 in number with a total estimated cost Rs. 29,23,451.

The accompanying statement shows water pumped at the various water-works in the Province together with the cost of pumping.

A. R. ASTBURY,

*Sanitary Engineer to Government, Punjab.*







## APPENDIX C.

Statement showing the death rates from cholera, small-pox, fevers and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns :—

| Towns.          | DATE OF COMPLETION OF WORKS OF |               | AVERAGE ANNUAL DEATH RATE SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH. |            |         |                          | AVERAGE ANNUAL DEATH RATE FOR THE FIVE YEARS' PERIOD PRECEDING THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH. |            |         |                          | REMARKS. |
|-----------------|--------------------------------|---------------|---|------------|---------|--------------------------|--|------------|---------|--------------------------|----------|
|                 | Drainage.                      | Water supply. | Cholera.  | Small-pox. | Fevers. | Dysentery and diarrhoea. | Cholera.   | Small-pox. | Fevers. | Dysentery and diarrhoea. |          |
| 1               | 2                              | 3             | 4   | 5          | 6       | 7                        | 8  | 9          | 10      | 11                       | 12       |
| Ambala          | ...                            | 1895          | 0.5   | 0.5        | 13.1    | 3.4                      | 0.5  | 0.4        | 19.3    | 6.4                      |          |
| Simla           | ...                            | 1893          | 0.02  | 0.4        | 13.6    | 0.8                      | ...  | 1.1        | 17.1    | 1.4                      |          |
| Ludhiana        | ...                            | 1895          | 0.4   | 0.9        | 18.8    | 1.9                      | 0.4  | 2.7        | 20.8    | 1.6                      |          |
| Jagraon         | ...                            | 1907          | 0.5   | 1.3        | 14.5    | 1.5                      | 0.6  | 1.5        | 9.3     | 2.0                      |          |
| Ferozepore      | ...                            | 1916          | 0.6   | 0.7        | 13.3    | 1.5                      | 0.2  | 0.7        | 9.8     | 1.1                      |          |
| Zira            | ...                            | 1913          | 0.6   | 2.1        | 18.9    | 0.8                      | 0.3  | 4.0        | 16.6    | 0.9                      |          |
| Fazilka         | ...                            | 1913          | 1.5   | 1.5        | 23.9    | 2.0                      | 2.2  | 2.6        | 21.4    | 1.7                      |          |
| Lahore          | ...                            | 1881          | 0.7   | 0.8        | 17.6    | 1.6                      | 1.9  | 1.6        | 27.8    | 2.3                      |          |
| Amritsar        | ...                            | 1885          | 0.7   | 1.3        | 23.2    | 2.0                      | 0.4  | 0.7        | 31.3    | 1.8                      |          |
| Gurdaspur       | ...                            | 1914          | 0.2   | 0.7        | 18.6    | 3.0                      | 0.8  | 0.5        | 13.2    | 2.6                      |          |
| Dalhousie       | ...                            | 1894          | 0.1   | 0.1        | 12.2    | 2.0                      | ...  | ...        | 9.6     | 2.4                      |          |
| Pathankot       | ...                            | 1915          | 0.8   | 0.9        | 23.7    | 4.0                      | 0.8  | 0.7        | 12.4    | 2.8                      |          |
| Sialkot         | ...                            | 1915          | 0.9   | 0.2        | 11.8    | 2.6                      | 3.0  | 1.2        | 9.6     | 2.3                      |          |
| Gujranwala      | ...                            | 1892          | 0.6   | 0.8        | 18.6    | 1.3                      | 0.5  | 0.6        | 19.7    | 1.7                      |          |
| Gujrat          | ...                            | 1906          | 1.1   | 0.4        | 20.5    | 1.9                      | 0.3  | 0.2        | 16.9    | 1.9                      |          |
| Bhera           | ...                            | 1917          | ...   | 0.4        | 25.7    | 2.3                      | 0.03   | 0.7        | 17.8    | 1.7                      |          |
| Sargodha        | ...                            | 1907          | 1907  | 0.3        | 8.1     | 0.5                      | Not available  |            |         |                          |          |
| Jhelum          | ...                            | 1908          | 0.1   | 0.5        | 14.1    | 1.7                      | 1.5  | 0.3        | 14.0    | 2.1                      |          |
| Pind Dadan Khan | ...                            | 1909          | 1909  | 0.1        | 0.9     | 23.0                     | 3.3  | 1.1        | 0.7     | 23.1                     | 3.6      |
| Rawalpindi      | ...                            | 1907          | 1887  | 0.6        | 0.3     | 19.0                     | 2.3  | 0.5        | 0.1     | 16.4                     | 3.4      |
| Murree          | ...                            | 1894          | 0.1   | 0.1        | 16.4    | 2.1                      | 0.7  | 0.4        | 14.8    | 0.9                      |          |
| Mianwali        | ...                            | 1904          | 0.2   | 0.6        | 21.7    | 2.3                      | Not available  |            |         |                          |          |
| Lyallpur        | ...                            | 1904          | 1904  | 0.1        | 0.8     | 12.0                     | 0.9  | 2.8*       | 0.4*    | 16.3*                    | 2.1*     |
| Gojra           | ...                            | 1916          | 0.1   | 0.4        | 8.5     | 0.5                      | †  | †          | 0.5†    | †                        |          |
| Multan          | ...                            | 1907          | 0.3   | 0.7        | 19.7    | 2.4                      | 0.01   | 1.9        | 16.9    | 2.4                      |          |
| Dera Ghazi Khan | ...                            | 1913          | 0.1   | 0.5        | 17.5    | 2.3                      | 2.0  | 0.6        | 15.9    | 1.6                      |          |
| Kelka           | ...                            | 1890          | 0.4   | 0.1        | 14.4    | 2.4                      | 1.7  | 0.2        | 15.2    | 3.9                      |          |

\* Figures available for four years only.

† Figures for 1914 and 1915 only.



**ANNUAL FORM No. I.**  
**STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB**  
**DURING THE YEAR 1919.**

| 2                    |                     | 3  |           |           | 4                            |          |         | 5  |          |        | 6   | 7   | 8   | 9  |          |        | 10  |
|----------------------|---------------------|--|-----------|-----------|------------------------------|----------|---------|--|----------|--------|---|---|---|--|----------|--------|-----|
| DISTRICTS.           |                     | POPULATION ACCORDING TO CENSUS OF 1911.* |           |           | NUMBER OF BIRTHS REGISTERED. |          |         | RATIO OF BIRTHS PER 1,000 OF POPULATION. |          |        | Number of males born to every 100 females born. | Excess of births over deaths per 1,000 of population. | Excess of deaths over births per 1,000 of population. | MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS. |          |        | No. |
|                      |                     | Males.                                   | Females.  | Total.    | Males.                       | Females. | Total.  | Males.                                   | Females. | Total. |   |   |   | Males.   | Females. | Total. |     |
| No.                  | 2                   | 3  | 4         | 5         | 6                            | 7        | 8       | 9  | 10       | 11     | 12  | 13  | 14  | 15   | 16       | 17     | 18  |
| AMBALA DIVISION.     |                     |  |           |           |                              |          |         |  |          |        |   |   |   |  |          |        |     |
| 1                    | Hissar ...          | 438,458                                  | 368,431   | 804,889   | 17,027                       | 15,449   | 32,276  | 21.2                                     | 18.9     | 40.1   | 111.7   | 12.0  | ...   | 25.0   | 22.9     | 47.9   | 1   |
| 2                    | Rohtak ...          | 385,401                                  | 323,433   | 714,834   | 16,445                       | 14,917   | 31,362  | 23.0                                     | 20.9     | 43.9   | 110.2   | 8.9   | ...   | 27.0   | 24.9     | 51.9   | 2   |
| 3                    | Gurgaon ...         | 389,215                                  | 339,552   | 729,167   | 15,731                       | 13,673   | 29,404  | 21.6                                     | 18.7     | 40.3   | 115.1   | 1.3   | ...   | 26.1   | 23.2     | 49.3   | 3   |
| 4                    | Ka. nal ...         | 476,698                                  | 36,030    | 790,787   | 17,851                       | 19,055   | 33,916  | 22.3                                     | 20.1     | 42.4   | 111.2   | 7.2   | ...   | 26.5   | 24.2     | 50.6   | 4   |
| 5                    | Am. lala ...        | 377,770                                  | 275,088   | 682,553   | 12,935                       | 11,739   | 24,704  | 20.5                                     | 18.6     | 39.1   | 116.4   | 7.1   | ...   | 22.8   | 21.3     | 44.0   | 5   |
| 6                    | Simla ...           | 27,015                                   | 12,955    | 34,970    | 407                          | 332      | 739     | 11.6                                     | 9.5      | 21.1   | 122.6   | ...   | 7.7   | 11.2   | 9.9      | 21.1   | 6   |
| JULLUNDUR DIVISION.  |                     |  |           |           |                              |          |         |  |          |        |   |   |   |  |          |        |     |
| 7                    | Kangra ...          | 208,401                                  | 268,285   | 766,686   | 12,988                       | 11,933   | 24,921  | 19.9                                     | 17.6     | 32.5   | 108.8   | 0.3   | ...   | 18.8   | 17.6     | 33.5   | 7   |
| 8                    | Hoshiarpur ...      | 501,510                                  | 417,449   | 918,569   | 18,624                       | 16,338   | 34,962  | 10.3                                     | 17.8     | 38.1   | 111.0   | 1.7   | ...   | 21.7   | 20.1     | 41.8   | 8   |
| 9                    | Ju. lundur ...      | 44,559                                   | 347,357   | 787,956   | 16,515                       | 15,718   | 31,733  | 21.0                                     | 19.3     | 40.3   | 108.5   | 15.4  | ...   | 23.4   | 22.1     | 45.4   | 9   |
| 10                   | Ludhiana ...        | 293,531                                  | 227,611   | 517,192   | 11,328                       | 10,267   | 21,485  | 21.7                                     | 19.8     | 41.5   | 109.5   | 15.1  | ...   | 25.6   | 23.8     | 49.4   | 10  |
| 11                   | Ferozepore ...      | 520,868                                  | 412,631   | 933,499   | 20,902                       | 18,294   | 39,236  | 22.5                                     | 19.6     | 42.1   | 114.7   | 14.1  | ...   | 25.8   | 23.5     | 49.3   | 11  |
| LAHORE DIVISION.     |                     |  |           |           |                              |          |         |  |          |        |   |   |   |  |          |        |     |
| 12                   | Lahore ...          | 551,498                                  | 438,214   | 1,017,742 | 24,331                       | 22,198   | 47,129  | 24.5                                     | 21.8     | 46.3   | 112.3   | 18.1  | ...   | 25.2   | 22.9     | 48.1   | 12  |
| 13                   | Amritsar ...        | 495,533                                  | 383,778   | 879,311   | 20,675                       | 17,485   | 38,160  | 23.5                                     | 21.0     | 44.5   | 111.8   | 17.0  | ...   | 25.7   | 23.7     | 49.4   | 13  |
| 14                   | Gurdaspur ...       | 466,116                                  | 336,416   | 832,531   | 17,211                       | 15,833   | 33,044  | 20.8                                     | 19.0     | 39.8   | 109.5   | 14.0  | ...   | 14.3   | 22.8     | 47.0   | 14  |
| 15                   | Sialkot ...         | 53,755                                   | 432,724   | 963,279   | 20,339                       | 1,158    | 21,397  | 11.0                                     | 18.9     | 39.9   | 111.5   | 14.4  | ...   | 24.6   | 22.4     | 47.0   | 15  |
| 16                   | Gujranwala† ...     | 518,251                                  | 405,168   | 923,419   | 20,891                       | 17,901   | 38,766  | 22.3                                     | 19.4     | 42.0   | 116.5   | 11.9  | ...   | 22.7   | 20.0     | 42.7   | 16  |
| RAWALPINDI DIVISION. |                     |  |           |           |                              |          |         |  |          |        |   |   |   |  |          |        |     |
| 17                   | Gujrat ...          | 400,636                                  | 347,038   | 747,634   | 14,546                       | 12,927   | 27,473  | 19.5                                     | 17.3     | 36.8   | 112.5   | 8.2   | ...   | 21.9   | 19.9     | 41.9   | 17  |
| 18                   | Sheikhpur ...       | 276,886                                  | 110,480   | 687,336   | 12,125                       | 11,789   | 24,714  | 19.1                                     | 16.9     | 36.0   | 113.3   | 14.5  | ...   | 21.6   | 18.1     | 38.8   | 18  |
| 19                   | Jhelum ...          | 272,238                                  | 241,947   | 509,185   | 8,801                        | 7,503    | 16,304  | 17.3                                     | 15.3     | 32.9   | 115.4   | 6.0   | ...   | 18.9   | 16.7     | 35.6   | 19  |
| 20                   | Rawalpindi ...      | 207,724                                  | 239,018   | 507,642   | 9,811                        | 8,692    | 18,503  | 19.4                                     | 17.1     | 36.5   | 113.2   | 8.8   | ...   | 19.8   | 18.1     | 37.8   | 20  |
| 21                   | Attock ...          | 270,992                                  | 241,894   | 515,286   | 9,539                        | 8,246    | 17,785  | 18.5                                     | 16.0     | 34.5   | 115.7   | 5.0   | ...   | 19.7   | 17.3     | 37.0   | 21  |
| 22                   | Mianwali ...        | 179,897                                  | 161,410   | 341,377   | 7,855                        | 6,930    | 14,785  | 23.0                                     | 20.3     | 43.3   | 113.3   | 15.3  | ...   | 21.8   | 19.1     | 40.9   | 22  |
| MULTAN DIVISION.     |                     |  |           |           |                              |          |         |  |          |        |   |   |   |  |          |        |     |
| 23                   | Montgomery ...      | 276,119                                  | 227,996   | 501,115   | 11,713                       | 11,842   | 23,555  | 21.2                                     | 23.5     | 50.7   | 115.8   | 19.0  | ...   | 18.6   | 21.0     | 44.5   | 23  |
| 24                   | Lyalpur ...         | 503,744                                  | 385,361   | 888,595   | 23,151                       | 21,492   | 43,543  | 25.9                                     | 23.1     | 49.0   | 112.5   | 22.7  | ...   | 25.3   | 23.1     | 45.4   | 24  |
| 25                   | Jhang ...           | 177,28                                   | 238,398   | 515,526   | 12,337                       | 10,921   | 23,258  | 23.9                                     | 21.2     | 45.1   | 113.0   | 20.4  | ...   | 23.7   | 21.0     | 44.7   | 25  |
| 26                   | Multan ...          | 435,110                                  | 355,865   | 801,375   | 18,796                       | 15,916   | 34,112  | 22.7                                     | 19.9     | 42.6   | 114.3   | 15.6  | ...   | 21.2   | 18.5     | 39.7   | 26  |
| 27                   | Muzaffargarh ...    | 303,360                                  | 261,111   | 569,451   | 9,905                        | 8,393    | 18,358  | 17.5                                     | 14.7     | 32.2   | 118.7   | 6.2   | ...   | 18.6   | 15.8     | 34.4   | 27  |
| 28                   | Dera Ghazi Khan ... | 272,409                                  | 227,151   | 499,460   | 7,146                        | 5,616    | 12,762  | 14.3                                     | 11.2     | 25.5   | 127.2   | 3.8   | ...   | 15.5   | 12.6     | 28.1   | 28  |
| Total ...            |                     | 10,698,101                               | 8,729,045 | 9,337,146 | 412,618                      | 335,828  | 778,843 | 21.4                                     | 18.9     | 40.3   | 112.6   | 12.0  | ...   | 23.1   | 21.0     | 44.1   |     |

\* Excluding population of military cantonments.

† The statistics of new District of Sheikhupura have not been shown separately this year, as it was constituted in the month of November 1919.



## STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

| 1                           | 2               | 3                     | 4                                   | 5                         |           |            | 6       |          |         |                                     | 7                            |          |         |
|-----------------------------|-----------------|-----------------------|-------------------------------------|---------------------------|-----------|------------|---------|----------|---------|-------------------------------------|------------------------------|----------|---------|
| No.                         | DISTRICTS.      | Area in square miles. | Average population per square mile. | POPULATION (CENSUS 1911). |           |            | BIRTHS. |          |         |                                     | NUMBER OF DEATHS REGISTERED. |          |         |
|                             |                 |                       |                                     | Males.                    | Females.  | Total.     | Males.  | Females. | Total.  | Birth rate per mille of population. | Males.                       | Females. | Total.  |
| 1                           | 2               | 3                     | 4                                   | 5                         | 6         | 7          | 8       | 9        | 10      | 11                                  | 12                           | 13       | 14      |
| <b>AMBALA DIVISION.</b>     |                 |                       |                                     |                           |           |            |         |          |         |                                     |                              |          |         |
| 1                           | Hissar          | 5,213                 | 154                                 | 438,458                   | 366,431   | 804,889    | 17,727  | 15,249   | 32,976  | 40.1                                | 12,032                       | 10,606   | 22,638  |
| 2                           | Rohtak          | 2,248                 | 318                                 | 395,401                   | 329,423   | 724,824    | 16,745  | 14,917   | 31,662  | 43.0                                | 13,074                       | 11,912   | 24,986  |
| 3                           | Gurgaon         | 2,204                 | 222                                 | 380,215                   | 339,052   | 719,267    | 15,73   | 13,63    | 29,364  | 40.3                                | 14,647                       | 12,765   | 27,412  |
| 4                           | Karnal          | 3,153                 | 254                                 | 437,608                   | 362,059   | 799,667    | 17,861  | 16,055   | 33,916  | 42.4                                | 14,848                       | 13,301   | 28,149  |
| 5                           | Ambala          | 1,851                 | 342                                 | 357,470                   | 275,113   | 632,583    | 12,965  | 11,739   | 24,704  | 39.1                                | 10,867                       | 9,395    | 20,262  |
| 6                           | Simla           | 101                   | 316                                 | 22,015                    | 14,915    | 36,930     | 407     | 332      | 739     | 21.1                                | 598                          | 408      | 1,006   |
| <b>JULLUNDUR DIVISION.</b>  |                 |                       |                                     |                           |           |            |         |          |         |                                     |                              |          |         |
| 7                           | Kangra          | 9,978                 | 77                                  | 399,401                   | 328,225   | 727,626    | 12,928  | 11,933   | 24,861  | 32.5                                | 12,325                       | 11,970   | 24,295  |
| 8                           | Hoshiarpur      | 2,247                 | 409                                 | 501,510                   | 417,559   | 919,069    | 18,724  | 16,338   | 35,062  | 38.1                                | 13,180                       | 11,985   | 25,165  |
| 9                           | Jullundur       | 1,431                 | 551                                 | 440,592                   | 347,357   | 787,949    | 16,515  | 15,218   | 31,733  | 40.3                                | 10,130                       | 9,497    | 19,627  |
| 10                          | Ludhiana        | 1,452                 | 356                                 | 293,531                   | 223,661   | 517,192    | 11,228  | 10,257   | 21,485  | 41.5                                | 6,964                        | 6,702    | 13,666  |
| 11                          | Ferozepore      | 4,288                 | 218                                 | 520,868                   | 412,631   | 933,499    | 20,992  | 18,294   | 39,286  | 42.1                                | 13,594                       | 11,920   | 25,514  |
| <b>LAHORE DIVISION.</b>     |                 |                       |                                     |                           |           |            |         |          |         |                                     |                              |          |         |
| 12                          | Lahore          | 2,814                 | 760                                 | 531,393                   | 436,744   | 1,017,747  | 24,931  | 22,198   | 47,129  | 45.3                                | 15,502                       | 13,191   | 28,693  |
| 13                          | Amritsar        | 1,601                 | 549                                 | 495,533                   | 383,778   | 879,311    | 20,775  | 18,445   | 39,220  | 44.5                                | 13,162                       | 11,018   | 24,180  |
| 14                          | Gurdaspur       | 1,889                 | 411                                 | 406,115                   | 356,446   | 762,561    | 17,321  | 15,813   | 33,134  | 39.8                                | 11,661                       | 9,812    | 21,473  |
| 15                          | Sialkot         | 1,991                 | 484                                 | 530,755                   | 432,524   | 963,279    | 20,239  | 18,158   | 38,397  | 39.9                                | 13,139                       | 11,444   | 24,583  |
| 16                          | Gujranwala      | 4,682                 | 226                                 | 718,251                   | 405,163   | 1,123,414  | 20,561  | 17,902   | 38,463  | 42.0                                | 15,328                       | 12,429   | 27,757  |
| <b>RAWALPINDI DIVISION.</b> |                 |                       |                                     |                           |           |            |         |          |         |                                     |                              |          |         |
| 17                          | Gujrat          | 2,051                 | 364                                 | 400,596                   | 345,038   | 745,634    | 14,546  | 12,927   | 27,473  | 36.8                                | 10,975                       | 9,842    | 20,817  |
| 18                          | Shahpur         | 5,087                 | 135                                 | 376,856                   | 310,440   | 687,296    | 13,125  | 11,589   | 24,714  | 36.0                                | 8,740                        | 6,708    | 14,748  |
| 19                          | Jhelum          | 2,813                 | 179                                 | 262,728                   | 241,927   | 504,655    | 8,891   | 7,703    | 16,594  | 32.9                                | 7,278                        | 6,301    | 13,579  |
| 20                          | Rawalpindi      | 2,010                 | 253                                 | 267,724                   | 219,018   | 486,742    | 9,841   | 8,692    | 18,533  | 30.5                                | 7,355                        | 6,711    | 14,066  |
| 21                          | Attock          | 4,025                 | 128                                 | 270,392                   | 214,894   | 485,286    | 9,529   | 8,246    | 17,775  | 34.5                                | 8,034                        | 7,177    | 15,211  |
| 22                          | Mianwali        | 5,395                 | 63                                  | 179,897                   | 161,430   | 341,327    | 7,855   | 6,930    | 14,785  | 43.3                                | 5,080                        | 4,486    | 9,566   |
| <b>MULTAN DIVISION.</b>     |                 |                       |                                     |                           |           |            |         |          |         |                                     |                              |          |         |
| 23                          | Montgomery      | 4,485                 | 113                                 | 276,119                   | 237,926   | 514,045    | 13,713  | 11,842   | 25,555  | 50.7                                | 8,607                        | 7,395    | 16,002  |
| 24                          | Lyallpur        | 3,310                 | 266                                 | 503,644                   | 385,251   | 888,895    | 23,051  | 20,492   | 43,543  | 49.0                                | 12,348                       | 11,029   | 23,377  |
| 25                          | Jhang           | 3,363                 | 153                                 | 277,128                   | 238,398   | 515,526    | 12,337  | 10,921   | 23,258  | 45.1                                | 6,658                        | 6,053    | 12,711  |
| 26                          | Multan          | 6,117                 | 131                                 | 435,410                   | 365,965   | 801,375    | 19,196  | 15,116   | 34,312  | 42.8                                | 11,466                       | 10,403   | 21,869  |
| 27                          | Muzaffargarh    | 6,052                 | 94                                  | 308,350                   | 261,111   | 569,461    | 9,665   | 8,393    | 18,058  | 32.2                                | 7,922                        | 6,798    | 14,720  |
| 28                          | Dera Ghazi Khan | 5,325                 | 94                                  | 272,409                   | 227,451   | 499,860    | 7,146   | 5,616    | 12,762  | 35.52                               | 6,094                        | 4,745    | 10,839  |
| Total                       |                 | 96,654                | 200                                 | 10,608,101                | 8,729,045 | 19,337,146 | 413,018 | 365,528  | 778,546 | 40.3                                | 291,266                      | 256,804  | 548,070 |

NOTE.—Those born dead are not



## No. II.

## DISTRICT OF THE PUNJAB DURING THE YEAR 1919.

| 8<br>Number of deaths of males to every 100 deaths of females. | 9<br>DEATHS PER 1,000 OF POPULATION FROM |            |         |        |                          |                       |           |                   |             |      |      | 10<br>MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS. |          |        | 11<br>No. |
|--|--|------------|---------|--------|--------------------------|-----------------------|-----------|-------------------|-------------|------|------|--|----------|--------|-----------|
|  | Cholera.                                 | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | Injuries. | All other causes. | All causes. |      |      | Male.  | Females. | Total. | No.       |
|  | 15                                       | 16         | 17      | 18     | 19                       | 20                    | 21        | 22                | 23          | 24   | 25   | 26   | 27       | 28     | 29        |
| 113.5  | 0.04                                     | 1.3        | 0.6     | 19.6   | 0.4                      | 0.9                   | 0.3       | 5.0               | 27.5        | 28.9 | 28.1 | 41.0   | 40.3     | 44.7   | 1         |
| 109.8  | 0.1                                      | 0.1        | 4.5     | 20.0   | 0.4                      | 1.5                   | 0.4       | 7.3               | 33.9        | 30.2 | 35.0 | 44.0   | 53.8     | 49.0   | 2         |
| 106.4  | 0.7                                      | 0.1        | 0.1     | 25.3   | 0.7                      | 1.4                   | 0.3       | 10.4              | 37.6        | 40.5 | 39.0 | 54.9   | 61.3     | 58.3   | 3         |
| 111.6  | 0  | 0.5        | 0.02    | 24.9   | 0.3                      | 1.4                   | 0.3       | 7.3               | 33.3        | 36.7 | 31.2 | 43.1   | 50.7     | 46.7   | 4         |
| 115.7  | 0.01                                     | 0.5        | 0.1     | 21.5   | 0                        | 4.1                   | 0.3       | 4.5               | 30.4        | 31.2 | 32.0 | 39.7   | 49.3     | 43.6   | 5         |
| 145.1  | ...                                      | 0.4        | ...     | 15.1   | 0.2                      | 3.2                   | 0.1       | 7.0               | 27.2        | 31.5 | 28.8 | 24.8   | 31.5     | 27.3   | 6         |
| 103.0  | 0.02                                     | 0.2        | ...     | 21.4   | 0.6                      | 4.6                   | 0.4       | 4.6               | 30.9        | 32.5 | 31.7 | 35.1   | 36.8     | 35.9   | 7         |
| 110.0  | 0.02                                     | 2.2        | 0.1     | 18.8   | 0.04                     | 2.4                   | 0.2       | 3.6               | 25.3        | 28.7 | 27.4 | 35.4   | 40.1     | 37.6   | 8         |
| 106.1  | 0.2                                      | 0.5        | 0.2     | 17.0   | 0.4                      | 1.5                   | 0.3       | 4.4               | 23.0        | 27.3 | 24.9 | 31.7   | 46.5     | 41.6   | 9         |
| 103.9  | 0.02                                     | 1.2        | 0.1     | 14.3   | 0.4                      | 1.9                   | 0.3       | 8.2               | 23.7        | 33.0 | 26.4 | 44.2   | 55.9     | 49.3   | 10        |
| 116.6  | 0.3                                      | 1.3        | 1.2     | 16.0   | 0.3                      | 1.3                   | 0.3       | 6.5               | 26.7        | 28.9 | 27.7 | 39.9   | 46.8     | 43.0   | 11        |
| 117.5  | 0.5                                      | 1.2        | 1.6     | 15.8   | 0.5                      | 1.9                   | 0.4       | 6.3               | 26.7        | 30.2 | 26.2 | 41.9   | 49.8     | 45.2   | 12        |
| 119.5  | 0.5                                      | 0.7        | 0.02    | 18.2   | 0.4                      | 3.3                   | 0.6       | 3.9               | 26.0        | 28.7 | 27.5 | 44.8   | 53.8     | 48.8   | 13        |
| 118.8  | 0.1                                      | 0.7        | 0.1     | 14.3   | 0.6                      | 6.4                   | 0.3       | 8.5               | 25.0        | 26.8 | 25.8 | 43.5   | 51.1     | 46.9   | 14        |
| 114.8  | 0.1                                      | 0.8        | 0.3     | 16.2   | 0.6                      | 3.2                   | 0.3       | 4.2               | 24.3        | 26.5 | 25.5 | 41.1   | 47.2     | 43.9   | 15        |
| 123.3  | 0.9                                      | 0.4        | 0.5     | 23.4   | 0.2                      | 0.6                   | 0.5       | 3.6               | 29.6        | 30.7 | 30.1 | 47.5   | 55.5     | 51.9   | 16        |
| 111.5  | 0.4                                      | 0.6        | 0.04    | 20.1   | 0.4                      | 2.1                   | 0.3       | 3.8               | 27.4        | 28.5 | 27.9 | 42.5   | 47.4     | 44.8   | 17        |
| 119.9  | 0.3                                      | 0.6        | 0.1     | 14.5   | 0.3                      | 1.0                   | 0.4       | 4.2               | 21.3        | 21.6 | 21.5 | 35.8   | 41.1     | 38.7   | 18        |
| 115.5  | 0.2                                      | 1.7        | 0.8     | 17.2   | 0.4                      | 2.0                   | 0.3       | 4.3               | 27.8        | 26.0 | 23.9 | 39.5   | 42.8     | 41.1   | 19        |
| 107.6  | 1.2                                      | 0.4        | 0.6     | 18.1   | 3.1                      | 2.7                   | 0.6       | 3.1               | 27.5        | 28.0 | 27.7 | 42.2   | 46.4     | 44.2   | 20        |
| 111.9  | 3.9                                      | 0.5        | 1.6     | 18.3   | 0.1                      | 1.1                   | 0.3       | 3.1               | 29.7        | 29.3 | 29.5 | 37.4   | 39.6     | 38.5   | 21        |
| 113.2  | 1.0                                      | 0.04       | 0.01    | 21.2   | 0.5                      | 0.8                   | 0.3       | 4.2               | 28.2        | 27.8 | 28.0 | 40.1   | 42.6     | 41.3   | 22        |
| 116.4  | 0.01                                     | 2.6        | 1.8     | 22.4   | 0.1                      | 0.2                   | 0.5       | 4.2               | 31.2        | 32.4 | 31.7 | 49.0   | 44.3     | 41.4   | 23        |
| 112.0  | 1.6                                      | 1.3        | 0.4     | 16.3   | 0.4                      | 0.8                   | 0.1       | 5.2               | 24.5        | 23.6 | 26.3 | 30.6   | 38.5     | 34.0   | 24        |
| 110.0  | 0.2                                      | 0.5        | 0.1     | 16.0   | 0.5                      | 0.6                   | 0.4       | 6.4               | 24.0        | 25.4 | 24.7 | 37.4   | 40.8     | 39.0   | 25        |
| 112.4  | 0.1                                      | 0.2        | 0.5     | 20.5   | 0.4                      | 1.0                   | 0.4       | 4.2               | 26.3        | 27.9 | 27.0 | 40.3   | 43.9     | 41.9   | 26        |
| 117.4  | 0.002                                    | 0.03       | 0.002   | 22.9   | 0.1                      | 0.4                   | 0.4       | 2.1               | 25.9        | 25.0 | 26.0 | 40.1   | 41.4     | 40.7   | 27        |
| 128.4  | 0.1                                      | 0.03       | 0.002   | 19.0   | 0.1                      | 0.2                   | 0.2       | 2.0               | 22.4        | 20.9 | 21.7 | 36.9   | 38.7     | 37.7   | 28        |
| 113.4  | 0.4                                      | 0.8        | 0.6     | 18.9   | 0.5                      | 2.0                   | 0.4       | 4.9               | 27.5        | 29.4 | 28.3 | 40.8   | 46.9     | 43.6   |           |

included in this or any other statement.



## ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1919.

| 1   | 2  | 3        |           |        |        |        |        |        |         |            |          |           |           | 4  |     |
|-----|--|----------|-----------|--------|--------|--------|--------|--------|---------|------------|----------|-----------|-----------|--|-----|
| No. | DISTRICTS.                               | January. | February. | March. | April. | May.   | June.  | July.  | August. | September. | October. | November. | December. | Total deaths registered during the year. | No. |
| 1   | 2  | 3        | 4         | 5      | 6      | 7      | 8      | 9      | 10      | 11         | 12       | 13        | 14        | 15                                       | 16  |
|     | AMBALA DIVISION.                         |          |           |        |        |        |        |        |         |            |          |           |           |  |     |
| 1   | Hissar ...                               | 2,167    | 1,730     | 1,755  | 2,098  | 2,163  | 3,060  | 1,704  | 1,158   | 1,437      | 2,009    | 1,635     | 1,438     | 22,644                                   | 1   |
| 2   | Rohtak ...                               | 1,734    | 1,410     | 2,111  | 2,810  | 2,662  | 2,734  | 1,605  | 1,095   | 1,710      | 2,614    | 2,574     | 2,007     | 24,986                                   | 2   |
| 3   | Gurgaon ...                              | 1,376    | 1,492     | 1,457  | 1,683  | 1,869  | 2,072  | 1,284  | 1,355   | 2,553      | 5,015    | 4,443     | 3,187     | 23,413                                   | 3   |
| 4   | Karnal ...                               | 2,189    | 1,332     | 1,314  | 1,547  | 2,421  | 3,180  | 1,912  | 1,732   | 2,560      | 3,546    | 2,320     | 2,658     | 28,139                                   | 4   |
| 5   | Ambala ...                               | 1,621    | 1,075     | 1,129  | 1,122  | 1,479  | 1,612  | 1,174  | 1,089   | 1,890      | 2,377    | 2,774     | 2,610     | 20,232                                   | 5   |
| 6   | Simla ...                                | 75       | 53        | 46     | 53     | 85     | 64     | 91     | 105     | 102        | 91       | 93        | 143       | 1,006                                    | 6   |
|     | JULLUNDUR DIVISION.                      |          |           |        |        |        |        |        |         |            |          |           |           |  |     |
| 7   | Kargra ...                               | 3,188    | 2,088     | 1,411  | 1,375  | 1,672  | 2,001  | 1,553  | 1,549   | 2,316      | 2,292    | 2,207     | 2,693     | 24,295                                   | 7   |
| 8   | Hoshiarpur ...                           | 1,848    | 1,451     | 1,579  | 1,733  | 2,619  | 2,100  | 1,520  | 1,594   | 2,611      | 3,108    | 2,731     | 2,971     | 25,165                                   | 8   |
| 9   | Jullundur ...                            | 1,407    | 1,233     | 1,296  | 1,373  | 1,452  | 1,499  | 1,213  | 1,476   | 2,074      | 2,253    | 2,210     | 2,131     | 19,627                                   | 9   |
| 10  | Ludhiana ...                             | 1,252    | 921       | 1,042  | 893    | 1,006  | 1,091  | 806    | 964     | 1,260      | 1,464    | 1,547     | 1,437     | 13,666                                   | 10  |
| 11  | Ferozepore ...                           | 2,513    | 1,069     | 2,216  | 2,413  | 2,298  | 2,768  | 1,938  | 1,461   | 1,966      | 2,129    | 2,521     | 2,239     | 25,814                                   | 11  |
|     | LAHORE DIVISION.                         |          |           |        |        |        |        |        |         |            |          |           |           |  |     |
| 12  | Lahore ...                               | 2,148    | 1,947     | 2,135  | 2,348  | 2,918  | 2,618  | 2,184  | 2,029   | 2,812      | 2,292    | 2,353     | 2,620     | 25,693                                   | 12  |
| 13  | Amritsar ...                             | 2,109    | 1,613     | 1,497  | 1,592  | 1,920  | 2,001  | 1,741  | 1,959   | 2,575      | 2,342    | 2,511     | 2,470     | 24,180                                   | 13  |
| 14  | Gurdaspur ...                            | 1,945    | 1,979     | 1,830  | 1,297  | 1,501  | 1,502  | 1,792  | 1,363   | 2,739      | 2,968    | 2,488     | 2,249     | 21,473                                   | 14  |
| 15  | Sialkot ...                              | 1,951    | 1,650     | 1,477  | 1,325  | 1,959  | 1,984  | 1,456  | 1,524   | 2,096      | 3,143    | 2,724     | 2,684     | 24,583                                   | 15  |
| 16  | Gujranwala ...                           | 3,721    | 2,358     | 2,237  | 1,418  | 1,992  | 2,275  | 2,427  | 1,457   | 1,895      | 2,235    | 2,574     | 2,993     | 27,767                                   | 16  |
|     | RAWALPINDI DIVISION.                     |          |           |        |        |        |        |        |         |            |          |           |           |  |     |
| 17  | Gujrat ...                               | 2,185    | 1,649     | 1,419  | 1,196  | 1,194  | 1,436  | 1,493  | 1,233   | 2,302      | 2,419    | 2,900     | 2,221     | 20,817                                   | 17  |
| 18  | Shahpur ...                              | 1,672    | 1,233     | 1,177  | 1,059  | 1,033  | 1,472  | 1,311  | 948     | 991        | 1,132    | 1,265     | 1,195     | 14,748                                   | 18  |
| 19  | Jhelum ...                               | 1,083    | 913       | 939    | 913    | 1,115  | 1,150  | 1,100  | 752     | 1,117      | 1,353    | 1,445     | 1,389     | 13,519                                   | 19  |
| 20  | Rawalpindi ...                           | 1,163    | 958       | 975    | 841    | 919    | 1,108  | 1,297  | 1,015   | 1,877      | 1,331    | 1,516     | 1,566     | 14,066                                   | 20  |
| 21  | Attock ...                               | 1,616    | 1,164     | 1,041  | 1,047  | 1,259  | 1,467  | 2,588  | 980     | 992        | 1,044    | 1,174     | 1,079     | 15,211                                   | 21  |
| 22  | Mianwali ...                             | 1,131    | 739       | 748    | 615    | 727    | 851    | 923    | 559     | 785        | 724      | 798       | 871       | 9,563                                    | 22  |
|     | MULTAN DIVISION.                         |          |           |        |        |        |        |        |         |            |          |           |           |  |     |
| 23  | Montgomery ...                           | 2,145    | 1,655     | 1,267  | 1,203  | 1,404  | 1,281  | 994    | 917     | 839        | 1,228    | 1,238     | 1,761     | 16,002                                   | 23  |
| 24  | Lyallpur ...                             | 1,712    | 1,376     | 1,694  | 1,547  | 2,272  | 2,006  | 2,789  | 1,847   | 2,013      | 1,605    | 2,652     | 2,169     | 24,777                                   | 24  |
| 25  | Jhang ...                                | 1,065    | 1,112     | 1,001  | 888    | 932    | 951    | 892    | 818     | 980        | 970      | 1,105     | 1,297     | 13,711                                   | 25  |
| 26  | Multan ...                               | 3,043    | 2,151     | 1,877  | 1,501  | 1,548  | 1,402  | 1,161  | 1,146   | 1,453      | 1,905    | 2,109     | 2,311     | 2,669                                    | 26  |
| 27  | Fazfargah ...                            | 1,849    | 1,418     | 1,243  | 1,043  | 1,158  | 983    | 861    | 713     | 841        | 1,178    | 1,532     | 1,933     | 14,782                                   | 27  |
| 28  | Feroza Ghazi Khan ...                    | 1,218    | 866       | 870    | 957    | 1,323  | 1,216  | 693    | 548     | 611        | 678      | 927       | 995       | 10,519                                   | 28  |
|     | Total for the Province.                  | 52,366   | 38,926    | 33,352 | 38,231 | 44,340 | 47,834 | 39,795 | 33,347  | 47,249     | 55,016   | 56,189    | 55,575    | 548,070                                  |     |
|     | Ratio of deaths per 1,000 in each month. | 2.71     | 2.01      | 1.98   | 1.98   | 2.29   | 2.47   | 2.06   | 1.72    | 1.44       | 2.89     | 2.90      | 2.67      | 29.84                                    |     |



---

ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM  
DIFFERENT DISEASES IN THE DISTRICTS OF THE PUNJAB  
DURING THE YEAR 1919.

---







## No. IV.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1919.

| 9                            |          | 10                           |          | 11                           |          | 12                           |          | 13                           |          | 14                    |          | 15     |          | 16  |
|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|-----------------------|----------|--------|----------|-----|
| 15 YEARS AND UNDER 20 YEARS. |          | 20 YEARS AND UNDER 30 YEARS. |          | 30 YEARS AND UNDER 40 YEARS. |          | 40 YEARS AND UNDER 50 YEARS. |          | 50 YEARS AND UNDER 60 YEARS. |          | 60 YEARS AND UPWARDS. |          | TOTAL. |          | No. |
| Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                | Females. | Males. | Females. |     |
| 13                           | 14       | 15                           | 16       | 17                           | 18       | 19                           | 20       | 21                           | 22       | 23                    | 24       | 25     | 26       | 27  |
| 4                            | 3        | 6                            | 5        | 3                            | 2        | 1                            | ...      | ...                          | ...      | ...                   | ...      | 17     | 12       | 1   |
| 23                           | 22       | 6                            | 7        | 4                            | 3        | ...                          | ...      | ...                          | ...      | ...                   | ...      | 561    | 502      |     |
| 36                           | 30       | 78                           | 60       | 45                           | 51       | 30                           | 33       | 20                           | 18       | 15                    | 8        | 251    | 211      |     |
| 93                           | 112      | 890                          | 740      | 493                          | 588      | 151                          | 49       | 590                          | 413      | 1,364                 | 1,184    | 8,310  | 7,435    |     |
| 11                           | 10       | 18                           | 24       | 19                           | 23       | 26                           | 29       | 35                           | 33       | 42                    | 40       | 163    | 176      |     |
| 18                           | 15       | 22                           | 19       | 70                           | 52       | 84                           | 56       | 91                           | 68       | 97                    | 80       | 418    | 319      |     |
| 6                            | 5        | 16                           | 10       | 20                           | 12       | 22                           | 16       | 34                           | 17       | 30                    | 10       | 135    | 89       |     |
| 58                           | 52       | 55                           | 51       | 36                           | 46       | 18                           | 16       | ...                          | ...      | ...                   | ...      | 2,183  | 1,852    |     |
| 254                          | 249      | 1,091                        | 916      | 690                          | 776      | 734                          | 649      | 760                          | 549      | 1,548                 | 1,332    | 12,038 | 10,606   |     |
| 9                            | 5        | 7                            | 9        | 5                            | 6        | 7                            | 4        | 3                            | ...      | 3                     | 1        | 44     | 31       | 2   |
| 2                            | ...      | ...                          | ...      | 2                            | ...      | ...                          | ...      | ...                          | ...      | ...                   | ...      | 36     | 27       |     |
| 170                          | 182      | 314                          | 347      | 263                          | 290      | 217                          | 211      | 174                          | 187      | 60                    | 53       | 1,555  | 1,678    |     |
| 246                          | 256      | 494                          | 507      | 410                          | 490      | 558                          | 435      | 570                          | 415      | 1,583                 | 1,038    | 7,746  | 6,987    |     |
| 14                           | 10       | 8                            | 14       | 7                            | 9        | 13                           | 7        | 23                           | 15       | 37                    | 33       | 173    | 144      |     |
| 5                            | 16       | 38                           | 42       | 30                           | 35       | 68                           | 55       | 131                          | 95       | 187                   | 185      | 541    | 512      |     |
| 14                           | 23       | 17                           | 30       | 26                           | 32       | 16                           | 27       | 10                           | 11       | 9                     | 15       | 136    | 182      |     |
| 26                           | 21       | 30                           | 32       | 18                           | 29       | 27                           | 23       | 24                           | 18       | 22                    | 26       | 2,848  | 2,351    |     |
| 436                          | 513      | 908                          | 981      | 761                          | 892      | 906                          | 760      | 938                          | 741      | 1,911                 | 1,351    | 13,074 | 11,912   |     |
| 15                           | 10       | 46                           | 22       | 25                           | 31       | 22                           | 23       | 20                           | 18       | 43                    | 19       | 285    | 220      | 3   |
| 1                            | ...      | ...                          | 5        | 1                            | ...      | ...                          | ...      | ...                          | ...      | ...                   | ...      | 48     | 50       |     |
| 8                            | 11       | 12                           | 9        | 7                            | 4        | 13                           | ...      | ...                          | ...      | ...                   | ...      | 44     | 24       |     |
| 166                          | 110      | 659                          | 647      | 468                          | 521      | 601                          | 517      | 787                          | 657      | 2,617                 | 1,502    | 9,504  | 8,905    |     |
| 29                           | 34       | 37                           | 23       | 26                           | 29       | 25                           | 30       | 37                           | 12       | 85                    | 33       | 262    | 218      |     |
| 47                           | 38       | 34                           | 46       | 46                           | 57       | 48                           | 33       | 55                           | 68       | 85                    | 96       | 513    | 513      |     |
| 2                            | 1        | 9                            | 27       | 25                           | 54       | 32                           | 45       | 17                           | 8        | 2                     | 5        | 87     | 140      |     |
| 176                          | 169      | 152                          | 172      | 194                          | 145      | 165                          | 102      | 121                          | 49       | 163                   | 197      | 3,904  | 3,666    |     |
| 444                          | 313      | 936                          | 951      | 792                          | 845      | 906                          | 750      | 1,017                        | 872      | 2,346                 | 1,852    | 14,647 | 13,766   |     |
| 48                           | 33       | 60                           | 45       | 40                           | 30       | 16                           | 15       | ...                          | 5        | ...                   | ...      | 211    | 161      | 4   |
| 16                           | 8        | 9                            | 7        | 3                            | ...      | ...                          | ...      | ...                          | ...      | ...                   | ...      | 187    | 170      |     |
| 5                            | 2        | 2                            | 2        | 1                            | 1        | ...                          | 1        | ...                          | ...      | ...                   | ...      | 9      | 6        |     |
| 249                          | 242      | 973                          | 844      | 804                          | 934      | 985                          | 758      | 969                          | 744      | 1,860                 | 1,412    | 10,508 | 9,442    |     |
| 8                            | 9        | 10                           | 10       | 14                           | 15       | 12                           | 11       | 16                           | 9        | 29                    | 12       | 126    | 107      |     |
| 49                           | 47       | 45                           | 38       | 35                           | 34       | 54                           | 53       | 95                           | 49       | 104                   | 98       | 590    | 516      |     |
| 16                           | 11       | 26                           | 34       | 38                           | 18       | 15                           | 24       | 10                           | 11       | 5                     | 9        | 125    | 134      |     |
| 31                           | 62       | 28                           | 19       | 39                           | 55       | 41                           | 89       | 45                           | 90       | 45                    | 94       | 3,082  | 2,771    |     |
| 423                          | 413      | 1,156                        | 1,037    | 974                          | 1,097    | 1,123                        | 951      | 1,135                        | 908      | 2,043                 | 1,625    | 14,838 | 13,301   |     |
| 5                            | 1        | 4                            | ...      | 6                            | 2        | 3                            | 4        | 1                            | 1        | 2                     | 1        | 34     | 25       | 5   |
| 10                           | 6        | 6                            | 13       | 11                           | 11       | 7                            | 6        | 5                            | 5        | 5                     | 4        | 146    | 136      |     |
| 7                            | 4        | 4                            | 3        | 4                            | 1        | 5                            | 2        | ...                          | 2        | ...                   | 2        | 29     | 32       |     |
| 173                          | 184      | 281                          | 349      | 264                          | 334      | 698                          | 472      | 594                          | 395      | 1,169                 | 918      | 7,215  | 6,336    |     |
| 17                           | 8        | 24                           | 17       | 11                           | 10       | 20                           | 12       | 27                           | 15       | 20                    | 12       | 224    | 144      |     |
| 59                           | 62       | 131                          | 125      | 104                          | 112      | 173                          | 114      | 129                          | 112      | 217                   | 125      | 1,594  | 1,302    |     |
| 17                           | 11       | 15                           | 5        | 1                            | 5        | 14                           | 6        | 7                            | 2        | 3                     | 2        | 122    | 51       |     |
| 66                           | 65       | 117                          | 106      | 101                          | 89       | 116                          | 104      | 127                          | 116      | 157                   | 167      | 1,483  | 1,369    |     |
| 354                          | 341      | 662                          | 618      | 618                          | 534      | 1,034                        | 720      | 890                          | 648      | 1,573                 | 1,231    | 10,867 | 9,395    |     |
| ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                   | ...      | ...    | ...      | 6   |
| ...                          | 1        | ...                          | 1        | 3                            | ...      | 1                            | 1        | 1                            | 1        | 1                     | ...      | 9      | 6        |     |
| ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                   | ...      | ...    | ...      |     |
| 14                           | 5        | 44                           | 37       | 47                           | 21       | 16                           | 10       | 26                           | 17       | 48                    | 35       | 323    | 215      |     |
| 4                            | 2        | 6                            | 5        | 6                            | 5        | 5                            | 5        | 4                            | 3        | 8                     | 4        | 53     | 41       |     |
| 2                            | 1        | 6                            | 4        | 6                            | 3        | 8                            | 4        | 11                           | 5        | 10                    | 5        | 60     | 50       |     |
| ...                          | 1        | ...                          | ...      | ...                          | 1        | ...                          | ...      | ...                          | ...      | ...                   | ...      | 1      | 4        |     |
| 8                            | 4        | 21                           | 9        | 17                           | 4        | 25                           | 10       | 17                           | 10       | 25                    | 9        | 152    | 92       |     |
| 28                           | 14       | 77                           | 56       | 79                           | 37       | 55                           | 30       | 59                           | 26       | 92                    | 53       | 593    | 408      |     |



[illegible]



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1919.

| 9                            |          | 10                           |          | 11                           |          | 12                           |          | 13                           |          | 14                    |          | 15     |          | 16  |
|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|-----------------------|----------|--------|----------|-----|
| 15 YEARS AND UNDER 20 YEARS. |          | 20 YEARS AND UNDER 30 YEARS. |          | 30 YEARS AND UNDER 40 YEARS. |          | 40 YEARS AND UNDER 50 YEARS. |          | 50 YEARS AND UNDER 60 YEARS. |          | 60 YEARS AND UPWARDS. |          | TOTAL. |          |     |
| Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                | Females. | Males. | Females. | No. |
| 13                           | 14       | 15                           | 16       | 17                           | 18       | 19                           | 20       | 21                           | 22       | 23                    | 24       | 25     | 26       | 27  |
| 1                            | ...      | 3                            | 2        | 4                            | ...      | 2                            | ...      | 2                            | ...      | ...                   | ...      | 12     | 2        |     |
| 6                            | 1        | 9                            | 2        | 10                           | 2        | 12                           | 2        | 15                           | 4        | 20                    | 12       | 86     | 86       |     |
| 155                          | 340      | 816                          | 1,337    | 690                          | 930      | 730                          | 676      | 716                          | 454      | 2,294                 | 1,735    | 8,272  | 8,096    | 7   |
| 39                           | 37       | 10                           | 13       | 9                            | 20       | 10                           | 15       | 7                            | 25       | 22                    | 20       | 233    | 240      |     |
| 116                          | 98       | 63                           | 75       | 214                          | 178      | 140                          | 85       | 182                          | 130      | 56                    | 66       | 1,879  | 1,653    |     |
| 30                           | 7        | 15                           | 8        | 14                           | 9        | 14                           | 7        | 15                           | 9        | 37                    | 19       | 193    | 91       |     |
| 89                           | 101      | 72                           | 104      | 132                          | 140      | 99                           | 75       | 155                          | 99       | 74                    | 270      | 1,660  | 1,852    |     |
| 435                          | 584      | 988                          | 1,541    | 1,073                        | 1,279    | 1,007                        | 860      | 1,092                        | 721      | 2,493                 | 2,122    | 12,325 | 11,970   |     |
| 1                            | ...      | 6                            | 1        | 1                            | 1        | 2                            | ...      | ...                          | ...      | ...                   | 1        | 8      | 8        |     |
| 39                           | 47       | 98                           | 91       | 69                           | 77       | 56                           | 60       | 35                           | 40       | 17                    | 28       | 1,026  | 968      |     |
| 7                            | 2        | 9                            | 5        | 8                            | 2        | 2                            | 1        | 3                            | 4        | 1                     | 1        | 44     | 31       |     |
| 176                          | 209      | 475                          | 710      | 476                          | 520      | 544                          | 454      | 601                          | 478      | 2,342                 | 1,735    | 8,791  | 8,459    | 8   |
| ...                          | ...      | ...                          | 1        | 1                            | ...      | 1                            | 1        | 2                            | 1        | 2                     | 2        | 24     | 17       |     |
| 29                           | 20       | 78                           | 94       | 67                           | 74       | 75                           | 55       | 91                           | 39       | 246                   | 123      | 1,331  | 914      |     |
| 7                            | 4        | 11                           | 9        | 21                           | 7        | 16                           | 9        | 14                           | 9        | 19                    | 6        | 134    | 83       |     |
| 12                           | 11       | 37                           | 40       | 34                           | 42       | 34                           | 33       | 38                           | 21       | 118                   | 70       | 1,822  | 1,505    |     |
| 271                          | 293      | 714                          | 941      | 677                          | 723      | 728                          | 615      | 784                          | 592      | 2,745                 | 1,966    | 13,180 | 11,985   |     |
| 6                            | 4        | 8                            | 10       | 11                           | 7        | ...                          | 4        | 11                           | 6        | 6                     | 5        | 75     | 52       |     |
| 5                            | 15       | 21                           | 19       | 7                            | 9        | 8                            | 6        | 3                            | 1        | 2                     | 3        | 193    | 201      |     |
| 4                            | 8        | 20                           | 6        | 12                           | 1        | 9                            | 1        | 6                            | 7        | 13                    | 8        | 90     | 60       |     |
| 150                          | 145      | 325                          | 401      | 325                          | 357      | 370                          | 303      | 406                          | 307      | 1,823                 | 1,484    | 6,830  | 6,548    | 9   |
| 1                            | 1        | 9                            | 11       | 8                            | 12       | 14                           | 5        | 7                            | 4        | 41                    | 17       | 163    | 116      |     |
| 9                            | 14       | 34                           | 37       | 25                           | 21       | 28                           | 14       | 45                           | 19       | 156                   | 89       | 879    | 642      |     |
| 10                           | 5        | 16                           | 10       | 9                            | 6        | 12                           | 5        | 9                            | 5        | 23                    | 27       | 167    | 102      |     |
| 7                            | 5        | 11                           | 18       | 14                           | 17       | 20                           | 11       | 27                           | 4        | 41                    | 21       | 1,708  | 1,776    |     |
| 192                          | 197      | 444                          | 512      | 411                          | 430      | 461                          | 349      | 604                          | 353      | 2,105                 | 1,654    | 10,130 | 9,497    |     |
| 1                            | ...      | 3                            | 1        | ...                          | 1        | ...                          | 1        | 1                            | ...      | ...                   | ...      | 6      | 5        |     |
| 14                           | 21       | 17                           | 25       | 20                           | 16       | 12                           | 9        | 5                            | 4        | 3                     | 1        | 316    | 325      |     |
| 5                            | 7        | 2                            | 3        | 8                            | 4        | 3                            | 5        | 2                            | 3        | 2                     | 4        | 37     | 36       |     |
| 395                          | 318      | 405                          | 362      | 421                          | 375      | 359                          | 351      | 249                          | 296      | 312                   | 307      | 3,747  | 3,645    | 10  |
| 2                            | 5        | 3                            | 7        | 4                            | 6        | 9                            | 12       | 25                           | 16       | 51                    | 35       | 127    | 94       |     |
| 41                           | 17       | 20                           | 15       | 39                           | 48       | 46                           | 51       | 62                           | 54       | 69                    | 38       | 545    | 415      |     |
| 10                           | 7        | 16                           | 8        | 15                           | 12       | 9                            | 6        | 13                           | 4        | 8                     | 4        | 89     | 58       |     |
| 41                           | 57       | 50                           | 43       | 27                           | 31       | 53                           | 55       | 48                           | 65       | 51                    | 47       | 2,107  | 2,124    |     |
| 510                          | 432      | 516                          | 464      | 534                          | 495      | 491                          | 490      | 405                          | 442      | 496                   | 436      | 6,964  | 6,702    |     |
| 16                           | 13       | 27                           | 15       | 26                           | 16       | 15                           | 12       | 11                           | 6        | 8                     | 4        | 161    | 107      |     |
| 41                           | 48       | 49                           | 34       | 27                           | 23       | 14                           | 19       | ...                          | 3        | ...                   | ...      | 906    | 801      |     |
| 52                           | 48       | 76                           | 92       | 65                           | 63       | 62                           | 55       | 51                           | 42       | 64                    | 60       | 574    | 588      |     |
| 179                          | 137      | 512                          | 479      | 448                          | 482      | 506                          | 352      | 420                          | 324      | 1,286                 | 979      | 7,993  | 6,928    | 11  |
| 10                           | 14       | 15                           | 13       | 19                           | 7        | 9                            | 10       | 13                           | 11       | 17                    | 12       | 132    | 107      |     |
| 42                           | 31       | 69                           | 48       | 54                           | 54       | 87                           | 41       | 76                           | 51       | 87                    | 53       | 715    | 518      |     |
| 15                           | 5        | 25                           | 11       | 26                           | 9        | 23                           | 5        | 11                           | 5        | 13                    | 11       | 170    | 83       |     |
| 81                           | 69       | 183                          | 155      | 184                          | 175      | 169                          | 135      | 170                          | 140      | 193                   | 141      | 3,243  | 2,788    |     |
| 436                          | 365      | 917                          | 847      | 875                          | 799      | 885                          | 649      | 822                          | 582      | 1,568                 | 1,263    | 13,894 | 11,920   |     |
| 60                           | 30       | 85                           | 80       | 45                           | 35       | 27                           | 26       | 6                            | 12       | ...                   | ...      | 269    | 222      |     |
| 20                           | 15       | 19                           | 17       | 4                            | 5        | 3                            | 3        | ...                          | ...      | ...                   | ...      | 662    | 565      |     |
| 95                           | 105      | 109                          | 112      | 94                           | 88       | 85                           | 91       | 61                           | 59       | 57                    | 57       | 793    | 818      |     |
| 153                          | 156      | 589                          | 518      | 541                          | 490      | 479                          | 277      | 490                          | 333      | 1,500                 | 1,137    | 8,656  | 7,424    | 12  |
| 12                           | 19       | 16                           | 11       | 25                           | 14       | 24                           | 14       | 23                           | 12       | 45                    | 35       | 298    | 191      |     |
| 45                           | 46       | 148                          | 118      | 87                           | 98       | 75                           | 59       | 61                           | 65       | 192                   | 142      | 1,004  | 850      |     |
| 25                           | 14       | 26                           | 6        | 33                           | 13       | 43                           | 12       | 25                           | 11       | 14                    | 5        | 274    | 132      |     |
| 33                           | 53       | 48                           | 44       | 86                           | 60       | 58                           | 63       | 94                           | 47       | 229                   | 139      | 3,486  | 2,989    |     |
| 443                          | 438      | 1,010                        | 906      | 915                          | 803      | 791                          | 545      | 760                          | 539      | 2,037                 | 1,513    | 15,502 | 13,191   |     |



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

| 1                              | 2                 | 3                              | 4                              | 5               |                | 6                           |          | 7                           |          | 8                            |          |     |
|--------------------------------|-------------------|--------------------------------|--------------------------------|-----------------|----------------|-----------------------------|----------|-----------------------------|----------|------------------------------|----------|-----|
| No.                            | Division.         | District.                      | DISEASES.                      | UNDER ONE YEAR. |                | ONE YEAR AND UNDER 5 YEARS. |          | 5 YEARS AND UNDER 10 YEARS. |          | 10 YEARS AND UNDER 15 YEARS. |          |     |
|                                |                   |                                |                                | Males.          | Females.       | Males.                      | Females. | Males.                      | Females. | Males.                       | Females. |     |
|                                |                   |                                |                                |                 |                |                             |          |                             |          |                              |          |     |
| 1                              | 2                 | 3                              | 4                              | 5               | 6              | 7                           | 8        | 9                           | 10       | 11                           | 12       |     |
| 13                             | LAHORE—continued. | AMRITSAR.                      | Cholera ... ..                 | ...             | ...            | 10                          | 9        | 21                          | 18       | 51                           | 29       |     |
|                                |                   |                                | Small-pox ... ..               | ...             | 86             | 64                          | 115      | 84                          | 56       | 41                           | 42       | 25  |
|                                |                   |                                | Plague ... ..                  | ...             | ...            | ...                         | ...      | ...                         | ...      | 1                            | ...      | 2   |
|                                |                   |                                | Fever ... ..                   | ...             | 2,240          | 2,192                       | 1,869    | 1,161                       | 422      | 278                          | 172      | 122 |
|                                |                   |                                | Dysentery and Diarrhoea ... .. | ...             | 39             | 21                          | 19       | 15                          | 14       | 11                           | 10       | 9   |
|                                |                   |                                | Respiratory diseases ... ..    | ...             | 400            | 328                         | 140      | 111                         | 120      | 110                          | 43       | 36  |
|                                |                   |                                | Injuries ... ..                | ...             | 69             | 13                          | 53       | 8                           | 43       | 12                           | 27       | 9   |
|                                |                   |                                | All other causes ... ..        | ...             | 935            | 871                         | 292      | 326                         | 60       | 62                           | 21       | 45  |
|                                |                   |                                | Total ... ..                   | ...             | 3,778          | 3,489                       | 2,628    | 2,514                       | 736      | 593                          | 366      | 277 |
|                                |                   |                                | 14                             | GUERDASPUR.     | Cholera ... .. | ...                         | ...      | ...                         | ...      | ...                          | ...      | ... |
| Small-pox ... ..               | ...               | 87                             |                                |                 | 70             | 58                          | 53       | 60                          | 59       | 15                           | 18       |     |
| Plague ... ..                  | ...               | ...                            |                                |                 | ...            | ...                         | ...      | 4                           | 3        | 8                            | 4        |     |
| Fever ... ..                   | ...               | 2,710                          |                                |                 | 2,311          | 1,611                       | 1,618    | 193                         | 185      | 106                          | 114      |     |
| Dysentery and Diarrhoea ... .. | ...               | 18                             |                                |                 | 7              | 20                          | 8        | 29                          | 29       | 38                           | 19       |     |
| Respiratory diseases ... ..    | ...               | 397                            |                                |                 | 373            | 316                         | 281      | 156                         | 174      | 117                          | 101      |     |
| Injuries ... ..                | ...               | ...                            |                                |                 | ...            | ...                         | ...      | 5                           | 2        | 9                            | 3        |     |
| All other causes ... ..        | ...               | 249                            |                                |                 | 199            | 210                         | 159      | 147                         | 104      | 51                           | 111      |     |
| Total ... ..                   | ...               | 3,461                          |                                |                 | 2,960          | 2,217                       | 2,119    | 594                         | 556      | 344                          | 370      |     |
| 15                             | SHIKOT.           | Cholera ... ..                 |                                |                 | ...            | ...                         | ...      | 9                           | 1        | 11                           | 3        | 3   |
|                                |                   | Small-pox ... ..               | ...                            | 87              | 86             | 153                         | 128      | 47                          | 52       | 26                           | 30       |     |
|                                |                   | Plague ... ..                  | ...                            | 3               | 2              | 11                          | 16       | 21                          | 19       | 27                           | 20       |     |
|                                |                   | Fever ... ..                   | ...                            | 1,871           | 1,604          | 1,833                       | 2,166    | 378                         | 317      | 225                          | 165      |     |
|                                |                   | Dysentery and Diarrhoea ... .. | ...                            | 105             | 71             | 63                          | 37       | 27                          | 24       | 23                           | 13       |     |
|                                |                   | Respiratory diseases ... ..    | ...                            | 622             | 516            | 239                         | 162      | 147                         | 131      | 98                           | 84       |     |
|                                |                   | Injuries ... ..                | ...                            | 2               | 1              | 28                          | 28       | 34                          | 22       | 16                           | 10       |     |
|                                |                   | All other causes ... ..        | ...                            | 919             | 881            | 426                         | 241      | 136                         | 128      | 63                           | 159      |     |
|                                |                   | Total ... ..                   | ...                            | 3,609           | 3,190          | 2,764                       | 2,769    | 801                         | 726      | 480                          | 485      |     |
|                                |                   | 16                             | GUERANWALA.                    | Cholera ... ..  | ...            | 15                          | 20       | 25                          | 13       | 70                           | 52       | 33  |
| Small-pox ... ..               | ...               |                                |                                | 101             | 89             | 44                          | 55       | 40                          | 22       | 10                           | 11       |     |
| Plague ... ..                  | ...               |                                |                                | 5               | 4              | 20                          | 15       | 17                          | 18       | 18                           | 24       |     |
| Fever ... ..                   | ...               |                                |                                | 2,725           | 2,374          | 1,435                       | 1,172    | 943                         | 873      | 935                          | 526      |     |
| Dysentery and Diarrhoea ... .. | ...               |                                |                                | 15              | 13             | 13                          | 12       | 8                           | 3        | 14                           | 8        |     |
| Respiratory diseases ... ..    | ...               |                                |                                | 35              | 27             | 15                          | 20       | 25                          | 14       | 13                           | 6        |     |
| Injuries ... ..                | ...               |                                |                                | 13              | 7              | 18                          | 10       | 20                          | 6        | 38                           | 15       |     |
| All other causes ... ..        | ...               |                                |                                | 761             | 543            | 267                         | 237      | 160                         | 87       | 100                          | 94       |     |
| Total ... ..                   | ...               |                                |                                | 3,670           | 2,977          | 1,837                       | 1,534    | 1,283                       | 1,075    | 1,161                        | 1,008    |     |
| 17                             | GUJARAT.          |                                |                                | Cholera ... ..  | ...            | 7                           | 11       | 16                          | 14       | 17                           | 15       | 22  |
|                                |                   | Small-pox ... ..               | ...                            | 84              | 55             | 40                          | 56       | 53                          | 50       | 12                           | 8        |     |
|                                |                   | Plague ... ..                  | ...                            | ...             | ...            | 1                           | ...      | 3                           | 1        | 2                            | 2        |     |
|                                |                   | Fever ... ..                   | ...                            | 1,723           | 1,473          | 901                         | 948      | 456                         | 406      | 437                          | 429      |     |
|                                |                   | Dysentery and Diarrhoea ... .. | ...                            | 1               | 1              | 5                           | 2        | 14                          | 9        | 22                           | 12       |     |
|                                |                   | Respiratory diseases ... ..    | ...                            | 266             | 296            | 130                         | 114      | 60                          | 44       | 25                           | 17       |     |
|                                |                   | Injuries ... ..                | ...                            | 2               | 2              | 14                          | 4        | 19                          | 9        | 18                           | 7        |     |
|                                |                   | All other causes ... ..        | ...                            | 268             | 252            | 263                         | 150      | 146                         | 144      | 114                          | 113      |     |
|                                |                   | Total ... ..                   | ...                            | 2,351           | 2,090          | 1,310                       | 1,288    | 768                         | 678      | 652                          | 601      |     |
|                                |                   | 18                             | SHANPUR.                       | Cholera ... ..  | ...            | 4                           | 2        | 26                          | 15       | 15                           | 11       | 12  |
| Small-pox ... ..               | ...               |                                |                                | 61              | 50             | 72                          | 59       | 38                          | 34       | 25                           | 29       |     |
| Plague ... ..                  | ...               |                                |                                | ...             | ...            | ...                         | 2        | 2                           | 6        | 3                            | 8        |     |
| Fever ... ..                   | ...               |                                |                                | 735             | 589            | 909                         | 943      | 392                         | 328      | 203                          | 168      |     |
| Dysentery and Diarrhoea ... .. | ...               |                                |                                | 2               | 2              | 5                           | 2        | 8                           | 2        | 11                           | 6        |     |
| Respiratory diseases ... ..    | ...               |                                |                                | 13              | 10             | 32                          | 15       | 32                          | 22       | 44                           | 28       |     |
| Injuries ... ..                | ...               |                                |                                | 2               | 3              | 25                          | 24       | 39                          | 30       | 26                           | 14       |     |
| All other causes ... ..        | ...               |                                |                                | 1,501           | 1,197          | 22                          | 30       | 21                          | 26       | 16                           | 14       |     |
| Total ... ..                   | ...               |                                |                                | 2,318           | 1,853          | 1,151                       | 1,090    | 547                         | 459      | 339                          | 280      |     |



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1919.

| 9                            |          | 10                           |          | 11                           |          | 12                           |          | 13                           |          | 14                    |          | 15     |          | 16  |
|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|-----------------------|----------|--------|----------|-----|
| 15 YEARS AND UNDER 20 YEARS. |          | 20 YEARS AND UNDER 30 YEARS. |          | 30 YEARS AND UNDER 40 YEARS. |          | 40 YEARS AND UNDER 50 YEARS. |          | 50 YEARS AND UNDER 60 YEARS. |          | 60 YEARS AND UPWARDS. |          | TOTAL. |          |     |
| Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                | Females. | Males. | Females. | No. |
| 13                           | 14       | 15                           | 16       | 17                           | 18       | 19                           | 20       | 21                           | 22       | 23                    | 24       | 25     | 26       | 27  |
| 33                           | 21       | 50                           | 42       | 62                           | 17       | 29                           | 21       | 11                           | 16       | 13                    | 6        | 280    | 179      | 13  |
| 15                           | 14       | 13                           | 5        | 7                            | 6        | ...                          | ...      | ...                          | ...      | ...                   | ...      | 334    | 239      |     |
| 1                            | 1        | 2                            | ...      | 2                            | 2        | ...                          | ...      | ...                          | ...      | ...                   | ...      | 8      | 7        |     |
| 185                          | 205      | 407                          | 593      | 455                          | 412      | 481                          | 231      | 594                          | 253      | 1,733                 | 1,150    | 8,592  | 7,447    |     |
| 20                           | 10       | 17                           | 11       | 12                           | 17       | 15                           | 17       | 38                           | 15       | 13                    | 7        | 197    | 133      |     |
| 92                           | 52       | 177                          | 117      | 119                          | 122      | 151                          | 109      | 96                           | 159      | 201                   | 185      | 1,548  | 1,309    |     |
| 23                           | 7        | 105                          | 9        | 45                           | 7        | 20                           | 2        | 23                           | 3        | 17                    | 5        | 430    | 75       |     |
| 53                           | 53       | 73                           | 78       | 42                           | 30       | 33                           | 23       | 31                           | 20       | 133                   | 121      | 1,773  | 1,020    |     |
| 427                          | 363      | 844                          | 855      | 744                          | 613      | 731                          | 454      | 793                          | 446      | 2,110                 | 1,474    | 13,162 | 11,018   |     |
| 5                            | 3        | 7                            | 5        | 4                            | 3        | 5                            | 4        | 7                            | 5        | 4                     | 3        | 32     | 23       | 14  |
| 18                           | 16       | 12                           | 14       | 12                           | 16       | 18                           | 15       | 8                            | 3        | ...                   | ...      | 288    | 264      |     |
| 6                            | 4        | 6                            | 12       | 10                           | 11       | 10                           | 6        | 4                            | 2        | 2                     | 2        | 50     | 44       |     |
| 99                           | 126      | 178                          | 190      | 206                          | 222      | 138                          | 93       | 197                          | 108      | 914                   | 550      | 6,352  | 5,517    |     |
| 39                           | 28       | 29                           | 29       | 35                           | 25       | 38                           | 27       | 25                           | 19       | 19                    | 10       | 299    | 201      |     |
| 99                           | 86       | 281                          | 293      | 273                          | 197      | 356                          | 182      | 378                          | 223      | 540                   | 485      | 2,915  | 2,395    |     |
| ...                          | 8        | 30                           | 18       | 28                           | 20       | 26                           | 10       | 18                           | 8        | 24                    | 8        | 140    | 77       |     |
| 38                           | 29       | 135                          | 115      | 141                          | 140      | 116                          | 105      | 103                          | 111      | 395                   | 218      | 1,585  | 1,291    |     |
| 303                          | 300      | 688                          | 676      | 709                          | 634      | 707                          | 442      | 740                          | 479      | 1,898                 | 1,276    | 11,651 | 9,812    |     |
| 7                            | 3        | 4                            | 2        | 5                            | 5        | 2                            | 2        | 4                            | 1        | 2                     | 1        | 47     | 22       | 15  |
| 18                           | 21       | 30                           | 22       | 14                           | 18       | 9                            | 5        | 8                            | 1        | 2                     | 2        | 394    | 360      |     |
| 16                           | 16       | 10                           | 20       | 13                           | 8        | 8                            | 7        | 5                            | 11       | 6                     | 11       | 120    | 130      |     |
| 103                          | 210      | 395                          | 468      | 395                          | 355      | 517                          | 385      | 583                          | 349      | 1,915                 | 1,290    | 8,275  | 7,339    |     |
| 18                           | 15       | 1                            | 12       | 14                           | 12       | 16                           | 8        | 13                           | 9        | 25                    | 24       | 319    | 225      |     |
| 99                           | 84       | 125                          | 102      | 109                          | 93       | 66                           | 52       | 55                           | 57       | 122                   | 101      | 1,682  | 1,401    |     |
| 6                            | 4        | 16                           | 8        | 17                           | 6        | 13                           | 5        | 16                           | 6        | 27                    | 9        | 175    | 99       |     |
| 52                           | 35       | 104                          | 74       | 105                          | 85       | 45                           | 23       | 45                           | 37       | 230                   | 205      | 2,127  | 1,868    |     |
| 379                          | 398      | 700                          | 708      | 672                          | 607      | 676                          | 487      | 729                          | 471      | 2,229                 | 1,613    | 13,139 | 11,444   |     |
| 30                           | 30       | 125                          | 75       | 50                           | 55       | 65                           | 61       | 25                           | 9        | 38                    | 32       | 506    | 352      | 16  |
| 5                            | 6        | 3                            | 5        | 2                            | 1        | 6                            | 2        | 2                            | 3        | 1                     | ...      | 214    | 194      |     |
| 23                           | 30       | 35                           | 40       | 58                           | 35       | 30                           | 13       | 18                           | 24       | 15                    | 12       | 244    | 215      |     |
| 850                          | 777      | 1,002                        | 773      | 900                          | 853      | 913                          | 775      | 922                          | 653      | 1,143                 | 798      | 11,798 | 9,774    |     |
| 13                           | 4        | ...                          | ...      | 4                            | 2        | 6                            | 3        | 5                            | 4        | 3                     | 5        | 83     | 54       |     |
| 48                           | 83       | 62                           | 43       | 63                           | 38       | 28                           | 15       | 23                           | 24       | 18                    | 17       | 359    | 239      |     |
| 25                           | 16       | 46                           | 14       | 40                           | 12       | 50                           | 20       | 23                           | 10       | 22                    | 9        | 297    | 119      |     |
| 90                           | 76       | 139                          | 103      | 76                           | 74       | 77                           | 60       | 84                           | 97       | 84                    | 111      | 1,836  | 1,482    |     |
| 1,119                        | 961      | 1,419                        | 1,053    | 1,243                        | 1,070    | 1,177                        | 949      | 1,102                        | 824      | 1,324                 | 984      | 15,328 | 12,429   |     |
| 10                           | 20       | 14                           | 9        | 9                            | 12       | 17                           | 12       | 5                            | 12       | 12                    | 19       | 129    | 137      | 17  |
| 11                           | 8        | 12                           | 7        | 5                            | 6        | 7                            | 3        | 2                            | ...      | ...                   | 1        | 223    | 194      |     |
| 1                            | ...      | 4                            | ...      | 5                            | 1        | 2                            | 4        | 1                            | ...      | 1                     | ...      | 20     | 9        |     |
| 401                          | 441      | 498                          | 576      | 638                          | 647      | 676                          | 683      | 742                          | 667      | 1,364                 | 1,084    | 7,886  | 7,354    |     |
| 22                           | 14       | 19                           | 15       | 10                           | 9        | 15                           | 15       | 28                           | 11       | 28                    | 15       | 164    | 103      |     |
| 36                           | 25       | 51                           | 14       | 50                           | 30       | 46                           | 40       | 101                          | 46       | 114                   | 43       | 879    | 699      |     |
| 15                           | 11       | 14                           | 8        | 27                           | 13       | 18                           | 9        | 9                            | 4        | 25                    | 15       | 161    | 77       |     |
| 127                          | 75       | 143                          | 97       | 121                          | 96       | 122                          | 117      | 150                          | 130      | 161                   | 125      | 1,560  | 1,299    |     |
| 623                          | 594      | 760                          | 721      | 865                          | 814      | 903                          | 883      | 1,038                        | 871      | 1,705                 | 1,302    | 10,975 | 9,842    |     |
| 10                           | 2        | 16                           | 15       | 18                           | 13       | 13                           | 16       | 9                            | 3        | 15                    | 4        | 138    | 91       | 18  |
| 16                           | 9        | 4                            | 3        | 2                            | 1        | 1                            | ...      | ...                          | ...      | ...                   | ...      | 219    | 185      |     |
| 2                            | 2        | 4                            | 4        | 2                            | 6        | 3                            | 4        | 2                            | 3        | 5                     | 3        | 23     | 37       |     |
| 133                          | 181      | 339                          | 373      | 365                          | 488      | 420                          | 318      | 454                          | 351      | 1,329                 | 936      | 5,389  | 4,641    |     |
| 18                           | 15       | 32                           | 16       | 24                           | 16       | 12                           | 12       | 16                           | 11       | 12                    | 10       | 144    | 22       |     |
| 56                           | 28       | 73                           | 49       | 76                           | 37       | 49                           | 29       | 39                           | 23       | 21                    | 18       | 435    | 269      |     |
| 20                           | 11       | 18                           | 10       | 14                           | 9        | 12                           | 8        | 5                            | 5        | 2                     | 1        | 163    | 116      |     |
| 7                            | 7        | 8                            | 6        | 3                            | 2        | 1                            | 2        | 1                            | 2        | ...                   | ...      | 1,579  | 1,287    |     |
| 202                          | 205      | 494                          | 432      | 504                          | 572      | 515                          | 389      | 526                          | 406      | 1,384                 | 472      | 6,040  | 6,708    |     |



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

| 1   | 2                     | 3           | 4                              | 5               |          | 6                           |          | 7                           |          | 8                            |          |
|-----|-----------------------|-------------|--------------------------------|-----------------|----------|-----------------------------|----------|-----------------------------|----------|------------------------------|----------|
| No. | Divisions.            | Districts.  | DISEASES.                      | UNDER ONE YEAR. |          | ONE YEAR AND UNDER 5 YEARS. |          | 5 YEARS AND UNDER 10 YEARS. |          | 10 YEARS AND UNDER 15 YEARS. |          |
|     |                       |             |                                | Males.          | Females. | Males.                      | Females. | Males.                      | Females. | Males.                       | Females. |
| 1   | 2                     | 3           | 4                              | 5               | 6        | 7                           | 8        | 9                           | 10       | 11                           | 12       |
| 19  | RAWALPINDI—CONCLUDED. | JHELUM.     | Cholera ... ..                 | ...             | 1        | 6                           | 8        | 8                           | 3        | 4                            | 2        |
|     |                       |             | Small-pox... ..                | 81              | 23       | 163                         | 165      | 90                          | 106      | 31                           | 22       |
|     |                       |             | Plague ... ..                  | 1               | 1        | 6                           | 4        | 14                          | 26       | 11                           | 34       |
|     |                       |             | Fever ... ..                   | 52              | 46       | 799                         | 878      | 315                         | 293      | 190                          | 149      |
|     |                       |             | Dysentery and Diarrhoea ... .. | 9               | 7        | 13                          | 10       | 9                           | 9        | 3                            | 2        |
|     |                       |             | Respiratory diseases ... ..    | 12              | 10       | 18                          | 12       | 10                          | 7        | 18                           | 11       |
|     |                       |             | Injuries ... ..                | ...             | 1        | 12                          | 14       | 17                          | 9        | 6                            | 9        |
|     |                       |             | All other causes ... ..        | 889             | 732      | 135                         | 106      | 19                          | 19       | 13                           | 8        |
|     |                       |             | Total ... ..                   | 1,574           | 1,301    | 1,152                       | 1,197    | 482                         | 472      | 286                          | 237      |
| 20  |                       | RAWALPINDI. | Cholera ... ..                 | ...             | 3        | 32                          | 21       | 42                          | 24       | 43                           | 33       |
|     |                       |             | Small-pox... ..                | 22              | 19       | 34                          | 34       | 19                          | 19       | 14                           | 6        |
|     |                       |             | Plague ... ..                  | ...             | 1        | 10                          | 5        | 27                          | 18       | 18                           | 26       |
|     |                       |             | Fever ... ..                   | 594             | 553      | 731                         | 818      | 245                         | 294      | 100                          | 146      |
|     |                       |             | Dysentery and Diarrhoea ... .. | 622             | 565      | 108                         | 107      | 11                          | 11       | 7                            | 8        |
|     |                       |             | Respiratory diseases ... ..    | 54              | 30       | 41                          | 31       | 23                          | 25       | 29                           | 30       |
|     |                       |             | Injuries ... ..                | 4               | 1        | 16                          | 12       | 14                          | 20       | 22                           | 10       |
|     |                       |             | All other causes ... ..        | 553             | 499      | 102                         | 88       | 18                          | 18       | 8                            | 8        |
|     |                       |             | Total ... ..                   | 1,849           | 1,671    | 1,074                       | 1,118    | 399                         | 429      | 301                          | 267      |
| 21  |                       | ATTOCK.     | Cholera ... ..                 | 40              | 26       | 118                         | 75       | 152                         | 115      | 99                           | 93       |
|     |                       |             | Small-pox... ..                | 44              | 21       | 60                          | 53       | 30                          | 20       | 13                           | 11       |
|     |                       |             | Plague ... ..                  | 2               | 4        | 32                          | 40       | 45                          | 42       | 47                           | 43       |
|     |                       |             | Fever ... ..                   | 583             | 545      | 938                         | 896      | 347                         | 322      | 222                          | 155      |
|     |                       |             | Dysentery and Diarrhoea ... .. | 4               | 3        | 5                           | 3        | 2                           | ...      | ...                          | ...      |
|     |                       |             | Respiratory diseases ... ..    | 6               | 6        | 21                          | 17       | 12                          | 10       | 6                            | 14       |
|     |                       |             | Injuries ... ..                | 2               | 1        | 7                           | 8        | 18                          | 11       | 9                            | 8        |
|     |                       |             | All other causes ... ..        | 799             | 683      | 94                          | 62       | 9                           | 11       | 5                            | 11       |
|     |                       |             | Total ... ..                   | 1,480           | 1,289    | 1,275                       | 1,154    | 615                         | 531      | 401                          | 334      |
| 22  |                       | MIANWALI.   | Cholera ... ..                 | 7               | 1        | 26                          | 17       | 25                          | 25       | 17                           | 15       |
|     |                       |             | Small-pox... ..                | 2               | 1        | 2                           | 1        | 2                           | 1        | ...                          | 1        |
|     |                       |             | Plague ... ..                  | ...             | ...      | ...                         | ...      | ...                         | ...      | ...                          | ...      |
|     |                       |             | Fever ... ..                   | 877             | 727      | 516                         | 482      | 168                         | 202      | 105                          | 110      |
|     |                       |             | Dysentery and Diarrhoea ... .. | 23              | 14       | 8                           | 12       | 7                           | 4        | 5                            | 1        |
|     |                       |             | Respiratory diseases ... ..    | 9               | 9        | 7                           | 9        | 2                           | 4        | 8                            | 4        |
|     |                       |             | Injuries ... ..                | 3               | 2        | 7                           | 7        | 9                           | 4        | 7                            | 7        |
|     |                       |             | All other causes ... ..        | 650             | 496      | 34                          | 32       | 12                          | 14       | 8                            | 1        |
|     |                       |             | Total ... ..                   | 1,571           | 1,259    | 600                         | 560      | 226                         | 254      | 150                          | 139      |
| 23  | MULTAN.               | MONTGOMERY. | Cholera ... ..                 | ...             | ...      | ...                         | ...      | ...                         | ...      | ...                          | ...      |
|     |                       |             | Small-pox... ..                | 178             | 143      | 247                         | 128      | 164                         | 240      | 31                           | 34       |
|     |                       |             | Plague ... ..                  | ...             | ...      | 6                           | 8        | 37                          | 42       | 68                           | 63       |
|     |                       |             | Fever ... ..                   | 1,652           | 1,423    | 853                         | 846      | 389                         | 235      | 248                          | 332      |
|     |                       |             | Dysentery and Diarrhoea ... .. | 1               | 1        | 8                           | 2        | 2                           | 2        | 1                            | 1        |
|     |                       |             | Respiratory diseases ... ..    | 4               | 2        | 3                           | 1        | 6                           | 4        | 6                            | 5        |
|     |                       |             | Injuries ... ..                | 4               | 8        | 12                          | 4        | 18                          | 10       | 17                           | 6        |
|     |                       |             | All other causes ... ..        | 445             | 270      | 98                          | 103      | 91                          | 80       | 116                          | 57       |
|     |                       |             | Total ... ..                   | 2,284           | 1,847    | 1,227                       | 1,092    | 707                         | 613      | 487                          | 498      |
| 24  |                       | LYALLPUR.   | Cholera ... ..                 | 6               | 13       | 53                          | 36       | 24                          | 49       | 49                           | 41       |
|     |                       |             | Small-pox... ..                | 144             | 125      | 227                         | 181      | 124                         | 197      | 69                           | 50       |
|     |                       |             | Plague ... ..                  | 1               | ...      | 5                           | 6        | 23                          | 15       | 14                           | 27       |
|     |                       |             | Fever ... ..                   | 3,024           | 2,738    | 1,922                       | 1,649    | 386                         | 434      | 168                          | 169      |
|     |                       |             | Dysentery and Diarrhoea ... .. | 3               | 5        | 5                           | 11       | 12                          | 6        | 1                            | 11       |
|     |                       |             | Respiratory diseases ... ..    | 3               | 4        | 23                          | 9        | 15                          | 16       | 15                           | 29       |
|     |                       |             | Injuries ... ..                | 16              | 21       | 37                          | 20       | 42                          | 16       | 26                           | 32       |
|     |                       |             | All other causes ... ..        | 976             | 853      | 539                         | 625      | 343                         | 239      | 173                          | 19       |
|     |                       |             | Total ... ..                   | 4,178           | 3,749    | 2,790                       | 2,537    | 971                         | 902      | 519                          | 463      |



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1919.

| 9                            |          | 10                           |          | 11                           |          | 12                           |          | 13                           |          | 14                    |          | 15     |          | 16  |
|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|-----------------------|----------|--------|----------|-----|
| 15 YEARS AND UNDER 20 YEARS. |          | 20 YEARS AND UNDER 30 YEARS. |          | 30 YEARS AND UNDER 40 YEARS. |          | 40 YEARS AND UNDER 50 YEARS. |          | 50 YEARS AND UNDER 60 YEARS. |          | 60 YEARS AND UPWARDS. |          | TOTAL. |          |     |
| Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                | Females. | Males. | Females. | No. |
| 13                           | 14       | 15                           | 16       | 17                           | 18       | 19                           | 20       | 21                           | 22       | 23                    | 24       | 25     | 26       | 27  |
| 1                            | 4        | 9                            | 10       | 8                            | 10       | 4                            | 5        | 4                            | 6        | 8                     | 3        | 52     | 52       | 19  |
| 8                            | 14       | 17                           | 17       | 17                           | 23       | 9                            | 7        | 2                            | 2        | 1                     | 3        | 419    | 442      |     |
| 17                           | 13       | 33                           | 39       | 33                           | 42       | 23                           | 29       | 19                           | 14       | 32                    | 27       | 194    | 236      |     |
| 150                          | 104      | 279                          | 287      | 345                          | 351      | 379                          | 338      | 419                          | 275      | 1,205                 | 861      | 4,644  | 4,003    |     |
| 2                            | ...      | 5                            | 8        | 10                           | 8        | 11                           | 8        | 9                            | 9        | 30                    | 12       | 101    | 73       |     |
| 17                           | 23       | 77                           | 61       | 103                          | 74       | 99                           | 53       | 61                           | 44       | 176                   | 134      | 582    | 429      |     |
| 9                            | 2        | 14                           | 15       | 11                           | 8        | 12                           | 6        | 10                           | 1        | 13                    | 4        | 104    | 69       |     |
| 11                           | 18       | 19                           | 38       | 17                           | 41       | 24                           | 20       | 18                           | 13       | 37                    | 8        | 1,182  | 1,008    |     |
| 215                          | 178      | 453                          | 472      | 549                          | 552      | 552                          | 466      | 533                          | 364      | 1,502                 | 1,052    | 7,278  | 6,301    |     |
| 33                           | 22       | 40                           | 53       | 52                           | 45       | 32                           | 24       | 25                           | 21       | 31                    | 21       | 330    | 271      | 20  |
| 7                            | 12       | 9                            | 11       | 8                            | 2        | 1                            | ...      | ...                          | ...      | ...                   | ...      | 114    | 105      |     |
| 26                           | 13       | 29                           | 17       | 28                           | 11       | 15                           | 24       | 11                           | 10       | 16                    | 15       | 180    | 140      |     |
| 112                          | 117      | 330                          | 377      | 346                          | 304      | 317                          | 281      | 331                          | 276      | 969                   | 735      | 4,165  | 3,991    |     |
| 2                            | 4        | 9                            | 8        | 17                           | 10       | 8                            | 10       | 14                           | 5        | 30                    | 11       | 88     | 739      |     |
| 44                           | 38       | 105                          | 113      | 171                          | 121      | 102                          | 72       | 91                           | 47       | 100                   | 93       | 760    | 600      |     |
| 7                            | 6        | 23                           | 16       | 28                           | 18       | 18                           | 10       | 22                           | 6        | 25                    | 8        | 179    | 107      |     |
| 4                            | 22       | 25                           | 42       | 19                           | 44       | 22                           | 15       | 20                           | 14       | 28                    | 8        | 799    | 758      |     |
| 235                          | 238      | 570                          | 647      | 669                          | 645      | 515                          | 438      | 514                          | 379      | 1,219                 | 891      | 7,355  | 6,711    |     |
| 123                          | 86       | 145                          | 108      | 138                          | 123      | 102                          | 98       | 120                          | 70       | 125                   | 61       | 1,162  | 850      | 21  |
| 2                            | 5        | 2                            | 1        | ...                          | 2        | 4                            | 1        | 2                            | ...      | 1                     | 1        | 158    | 115      |     |
| 19                           | 45       | 34                           | 75       | 58                           | 97       | 35                           | 67       | 26                           | 43       | 42                    | 45       | 338    | 500      |     |
| 157                          | 148      | 338                          | 443      | 463                          | 453      | 451                          | 378      | 450                          | 316      | 980                   | 790      | 4,929  | 4,486    |     |
| ...                          | 1        | 4                            | 2        | 2                            | 4        | 2                            | 3        | 1                            | 1        | 7                     | 5        | 27     | 22       |     |
| 12                           | 24       | 50                           | 39       | 54                           | 43       | 40                           | 24       | 28                           | 27       | 83                    | 60       | 302    | 264      |     |
| 8                            | 2        | 20                           | 8        | 24                           | 6        | 14                           | 8        | 10                           | 3        | 11                    | 3        | 113    | 53       |     |
| 7                            | 8        | 8                            | 23       | 20                           | 30       | 12                           | 14       | 14                           | 10       | 17                    | 15       | 955    | 867      |     |
| 328                          | 319      | 601                          | 699      | 757                          | 713      | 650                          | 588      | 651                          | 500      | 1,266                 | 970      | 8,034  | 7,177    |     |
| 15                           | 9        | 16                           | 19       | 19                           | 26       | 20                           | 17       | 16                           | 13       | 11                    | 9        | 173    | 151      | 22  |
| ...                          | 1        | 4                            | ...      | ...                          | ...      | ...                          | ...      | ...                          | ...      | ...                   | ...      | 10     | 5        |     |
| ...                          | ...      | 2                            | 1        | ...                          | ...      | ...                          | ...      | 1                            | ...      | ...                   | ...      | 3      | 1        |     |
| 89                           | 84       | 298                          | 341      | 320                          | 341      | 367                          | 344      | 380                          | 297      | 653                   | 537      | 3,778  | 3,405    |     |
| 3                            | 3        | 6                            | 7        | 4                            | 7        | 6                            | 4        | 8                            | 8        | 17                    | 13       | 87     | 73       |     |
| 12                           | 5        | 19                           | 12       | 26                           | 22       | 15                           | 10       | 24                           | 15       | 37                    | 17       | 159    | 107      |     |
| 5                            | 4        | 13                           | 5        | 13                           | 3        | 7                            | 2        | 3                            | 4        | 5                     | 3        | 72     | 41       |     |
| 8                            | 9        | 14                           | 32       | 17                           | 29       | 11                           | 11       | 17                           | 5        | 27                    | 14       | 798    | 643      |     |
| 132                          | 115      | 372                          | 417      | 399                          | 428      | 426                          | 385      | 449                          | 242      | 755                   | 593      | 5,090  | 4,486    |     |
| 1                            | ...      | 1                            | ...      | 1                            | ...      | ...                          | 1        | ...                          | ...      | ...                   | ...      | 3      | 1        | 23  |
| 29                           | 39       | 28                           | 26       | 22                           | 6        | 4                            | 2        | ...                          | 4        | ...                   | ...      | 708    | 622      |     |
| 51                           | 83       | 87                           | 82       | 91                           | 70       | 41                           | 59       | 15                           | 63       | 6                     | 31       | 432    | 492      |     |
| 225                          | 169      | 412                          | 334      | 333                          | 413      | 428                          | 411      | 446                          | 273      | 1,070                 | 733      | 6,056  | 5,219    |     |
| 3                            | 2        | 1                            | 1        | 1                            | 4        | 2                            | 3        | 1                            | 2        | 2                     | 1        | 22     | 19       |     |
| 5                            | 2        | 12                           | 1        | 5                            | 4        | 15                           | 7        | 3                            | 8        | 2                     | 6        | 61     | 40       |     |
| 14                           | 15       | 27                           | 9        | 18                           | 10       | 16                           | 6        | 4                            | 8        | 14                    | 8        | 144    | 85       |     |
| 91                           | 44       | 50                           | 91       | 94                           | 62       | 83                           | 66       | 87                           | 73       | 56                    | 71       | 1,211  | 917      |     |
| 419                          | 355      | 618                          | 594      | 565                          | 569      | 589                          | 546      | 558                          | 431      | 1,153                 | 850      | 8,607  | 7,395    |     |
| 84                           | 73       | 161                          | 92       | 173                          | 115      | 156                          | 126      | 42                           | 42       | 36                    | 27       | 766    | 614      | 24  |
| 32                           | 27       | 14                           | 18       | 15                           | 13       | 4                            | 1        | ...                          | ...      | ...                   | ...      | 629    | 541      |     |
| 31                           | 22       | 28                           | 33       | 17                           | 26       | 26                           | 28       | 16                           | 14       | 8                     | 8        | 173    | 269      |     |
| 80                           | 64       | 255                          | 281      | 178                          | 268      | 125                          | 148      | 203                          | 226      | 1,160                 | 981      | 7,501  | 6,948    |     |
| 16                           | 13       | 10                           | 14       | 25                           | 17       | 40                           | 18       | 40                           | 39       | 42                    | 24       | 194    | 158      |     |
| 25                           | 23       | 32                           | 30       | 35                           | 30       | 53                           | 32       | 91                           | 45       | 189                   | 73       | 430    | 284      |     |
| 29                           | 16       | 28                           | 8        | 12                           | 6        | 9                            | 3        | 4                            | 3        | 3                     | ...      | 207    | 125      |     |
| 75                           | 63       | 87                           | 101      | 75                           | 55       | 62                           | 43       | 81                           | 39       | 37                    | 18       | 2,443  | 2,140    |     |
| 372                          | 309      | 610                          | 577      | 536                          | 539      | 475                          | 409      | 477                          | 408      | 1,425                 | 1,131    | 12,348 | 11,029   |     |



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

| 1   | 2                   | 3                | 4                           | 5               |          | 6                           |          | 7                           |           | 8                            |          |
|---|---------------------|------------------|-----------------------------|-----------------|----------|-----------------------------|----------|-----------------------------|-----------|------------------------------|----------|
| No.                                       | Divisions.          | Districts.       | DISEASES.                   | UNDER ONE YEAR. |          | ONE YEAR AND UNDER 5 YEARS. |          | 5 YEARS AND UNDER 10 YEARS. |           | 10 YEARS AND UNDER 15 YEARS. |          |
|   |                     |                  |                             | Males.          | Females. | Males.                      | Females. | Males.                      | Females.  | Males.                       | Females. |
| 1   | 2                   | 3                | 4                           | 5               | 6        | 7                           | 8        | 9                           | 10        | 11                           | 12       |
| 25  | MULتان - CONCLUDED. | JHANG.           | Cholera ...                 | 7               | 5        | 5                           | 8        | 12                          | 1         | 2                            | 4        |
|   |                     |                  | Small-pox ...               | 34              | 41       | 30                          | 27       | 19                          | 21        | 17                           | 11       |
|   |                     |                  | Plague ...                  | ...             | ...      | 2                           | 2        | 2                           | 1         | 2                            | 1        |
|   |                     |                  | Fever ...                   | 912             | 912      | 695                         | 541      | 265                         | 231       | 147                          | 168      |
|   |                     |                  | Dysentery and Diarrhoea ... | 38              | 31       | 22                          | 25       | 9                           | 3         | 3                            | 6        |
|   |                     |                  | Respiratory diseases ...    | 17              | 12       | 11                          | 4        | ...                         | ...       | 4                            | 6        |
|   |                     |                  | Injuries ...                | 13              | 11       | 12                          | 32       | 20                          | 16        | 14                           | 8        |
|   |                     |                  | All other causes ...        | 1,227           | 927      | 118                         | 67       | 47                          | 55        | 55                           | 40       |
|   |                     |                  | Total ...                   | 2,248           | 1,939    | 805                         | 696      | 374                         | 322       | 244                          | 244      |
|   |                     |                  |                             |                 |          |                             |          |                             |           |                              |          |
| 26  | MULتان - CONCLUDED. | MULتان.          | Cholera ...                 | ...             | ...      | 2                           | 1        | 3                           | 3         | 2                            | 2        |
|   |                     |                  | Small-pox ...               | 12              | 16       | 13                          | 21       | 15                          | 13        | 10                           | 9        |
|   |                     |                  | Plague ...                  | ...             | ...      | 8                           | 10       | 14                          | 13        | 16                           | 15       |
|   |                     |                  | Fever ...                   | 2,633           | 2,156    | 671                         | 717      | 415                         | 464       | 364                          | 397      |
|   |                     |                  | Dysentery and Diarrhoea ... | 48              | 39       | 20                          | 20       | 14                          | 8         | 9                            | 8        |
|   |                     |                  | Respiratory diseases ...    | 59              | 52       | 31                          | 29       | 19                          | 17        | 18                           | 27       |
|   |                     |                  | Injuries ...                | 15              | 7        | 20                          | 18       | 23                          | 16        | 17                           | 14       |
|   |                     |                  | All other causes ...        | 617             | 551      | 360                         | 300      | 73                          | 63        | 83                           | 68       |
|   |                     |                  | Total ...                   | 3,384           | 2,821    | 1,130                       | 1,136    | 576                         | 597       | 519                          | 540      |
|   |                     |                  |                             |                 |          |                             |          |                             |           |                              |          |
| 27  | MULتان - CONCLUDED. | MULتانFARGH.     | Cholera ...                 | ...             | ...      | ...                         | 1        | ...                         | ...       | ...                          | ...      |
|   |                     |                  | Small-pox ...               | 1               | 1        | 3                           | ...      | 3                           | 1         | ...                          | ...      |
|   |                     |                  | Plague ...                  | ...             | ...      | ...                         | ...      | ...                         | ...       | ...                          | ...      |
|   |                     |                  | Fever ...                   | 1,663           | 1,082    | 735                         | 668      | 329                         | 292       | 286                          | 235      |
|   |                     |                  | Dysentery and Diarrhoea ... | 17              | 15       | 5                           | 3        | 1                           | ...       | 1                            | 1        |
|   |                     |                  | Respiratory diseases ...    | 9               | 5        | 6                           | 2        | 1                           | ...       | 4                            | 5        |
|   |                     |                  | Injuries ...                | ...             | 3        | 25                          | 24       | 23                          | 16        | 15                           | 9        |
|   |                     |                  | All other causes ...        | 475             | 407      | 18                          | 18       | 4                           | 19        | 6                            | 5        |
|   |                     |                  | Total ...                   | 1,765           | 1,513    | 792                         | 716      | 361                         | 328       | 312                          | 255      |
|   |                     |                  |                             |                 |          |                             |          |                             |           |                              |          |
| 28  | MULتان - CONCLUDED. | DERA GHAZI KHAN. | Cholera ...                 | ...             | ...      | ...                         | ...      | 3                           | ...       | 3                            | 2        |
|   |                     |                  | Small-pox ...               | 2               | ...      | 3                           | 2        | 3                           | 3         | 1                            | ...      |
|   |                     |                  | Plague ...                  | ...             | ...      | ...                         | ...      | ...                         | ...       | ...                          | ...      |
|   |                     |                  | Fever ...                   | 1,034           | 739      | 628                         | 584      | 333                         | 299       | 162                          | 151      |
|   |                     |                  | Dysentery and Diarrhoea ... | 4               | 2        | 3                           | 1        | ...                         | ...       | 3                            | 2        |
|   |                     |                  | Respiratory diseases ...    | 4               | 3        | 5                           | 3        | 5                           | 3         | ...                          | ...      |
|   |                     |                  | Injuries ...                | 15              | 4        | 13                          | 6        | 2                           | ...       | 5                            | 4        |
|   |                     |                  | All other causes ...        | 139             | 114      | 61                          | 36       | 25                          | 26        | 37                           | 21       |
|   |                     |                  | Total ...                   | 1,198           | 862      | 713                         | 632      | 371                         | 331       | 211                          | 180      |
|   |                     |                  |                             |                 |          |                             |          |                             |           |                              |          |
| Total for the Province—                   |                     |                  |                             |                 |          |                             |          |                             |           |                              |          |
| Cholera ...                               |                     |                  |                             | 96              | 85       | 389                         | 277      | 506                         | 414       | 464                          | 360      |
| Small-pox ...                             |                     |                  |                             | 2,080           | 1,768    | 2,627                       | 2,258    | 1,481                       | 1,496     | 574                          | 510      |
| Plague ...                                |                     |                  |                             | 112             | 165      | 323                         | 352      | 492                         | 526       | 569                          | 666      |
| Fever ...                                 |                     |                  |                             | 44,164          | 39,324   | 33,253                      | 33,618   | 11,118                      | 10,385    | 6,897                        | 6,512    |
| Dysentery and Diarrhoea ...               |                     |                  |                             | 1,226           | 1,001    | 551                         | 445      | 295                         | 240       | 302                          | 216      |
| Respiratory diseases ...                  |                     |                  |                             | 4,416           | 3,741    | 2,308                       | 1,807    | 1,201                       | 1,050     | 875                          | 804      |
| Injuries ...                              |                     |                  |                             | 207             | 115      | 449                         | 331      | 501                         | 293       | 411                          | 268      |
| All other causes ...                      |                     |                  |                             | 27,839          | 22,653   | 9,077                       | 7,784    | 2,590                       | 2,246     | 1,621                        | 1,578    |
| Total ...                                 |                     |                  |                             | 78,100          | 68,792   | 48,997                      | 46,872   | 18,254                      | 16,550    | 11,723                       | 10,924   |
| Population according to Census of 1911... |                     |                  |                             | 424,654         | 404,431  | 997,515                     | 931,872  | 1,482,324                   | 1,259,701 | 1,321,272                    | 931,615  |
| Ratio per 1,000 living for the Province—  |                     |                  |                             |                 |          |                             |          |                             |           |                              |          |
| Cholera ...                               |                     |                  |                             | 0.23            | 0.21     | 0.39                        | 0.30     | 0.34                        | 0.33      | 0.35                         | 0.39     |
| Small-pox ...                             |                     |                  |                             | 4.90            | 4.37     | 2.63                        | 2.42     | 1.00                        | 1.19      | 0.43                         | 0.55     |
| Plague ...                                |                     |                  |                             | 0.26            | 0.26     | 0.32                        | 0.38     | 0.33                        | 0.42      | 0.43                         | 0.70     |
| Fever ...                                 |                     |                  |                             | 104.00          | 97.23    | 33.33                       | 36.08    | 7.55                        | 8.24      | 5.23                         | 7.02     |
| Dysentery and Diarrhoea ...               |                     |                  |                             | 2.89            | 2.48     | 0.55                        | 0.48     | 0.20                        | 0.19      | 0.23                         | 0.23     |
| Respiratory diseases ...                  |                     |                  |                             | 10.40           | 9.25     | 2.31                        | 1.94     | 0.81                        | 0.83      | 0.66                         | 0.86     |
| Injuries ...                              |                     |                  |                             | 0.49            | 0.28     | 0.45                        | 0.36     | 0.34                        | 0.23      | 0.32                         | 0.28     |
| All other causes ...                      |                     |                  |                             | 60.99           | 55.01    | 9.12                        | 8.25     | 1.75                        | 1.78      | 1.23                         | 1.69     |
| Total ...                                 |                     |                  |                             | 184.15          | 170.10   | 49.13                       | 50.30    | 12.31                       | 13.22     | 8.87                         | 11.78    |

NOTE.—The population of Military cantonments by different ages cannot be

NOTE.—As the correct population of the different age periods according to the census of 1911 of the Punjab Province as at present constituted is not prior to the separation of the (new) Delhi Province,—vide Punjab Government



## No. IV—CONCLUDED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1919.

| 9                            |          | 10                           |           | 11                           |           | 12                           |          | 13                           |          | 14                    |          | 15         |           | 16  |
|------------------------------|----------|------------------------------|-----------|------------------------------|-----------|------------------------------|----------|------------------------------|----------|-----------------------|----------|------------|-----------|-----|
| 15 YEARS AND UNDER 20 YEARS. |          | 20 YEARS AND UNDER 30 YEARS. |           | 30 YEARS AND UNDER 40 YEARS. |           | 40 YEARS AND UNDER 50 YEARS. |          | 50 YEARS AND UNDER 60 YEARS. |          | 60 YEARS AND UPWARDS. |          | TOTAL.     |           |     |
| Males.                       | Females. | Males.                       | Females.  | Males.                       | Females.  | Males.                       | Females. | Males.                       | Females. | Males.                | Females. | Males.     | Females.  | No. |
| 13                           | 14       | 15                           | 16        | 17                           | 18        | 19                           | 20       | 21                           | 22       | 23                    | 24       | 25         | 26        | 27  |
| 4                            | 4        | 10                           | 10        | 10                           | 13        | 6                            | 6        | 3                            | 3        | 5                     | 6        | 64         | 60        |     |
| 10                           | 8        | 7                            | 3         | 1                            | 1         | 1                            | 1        | 1                            | 1        | ...                   | ...      | 198        | 113       |     |
| 2                            | 2        | 1                            | 1         | 3                            | 1         | 4                            | 2        | 3                            | 1        | ...                   | ...      | 20         | 12        |     |
| 111                          | 83       | 258                          | 338       | 273                          | 365       | 272                          | 329      | 403                          | 319      | 957                   | 750      | 4,313      | 4,038     | 25  |
| 3                            | 12       | 7                            | 4         | 12                           | 12        | 13                           | 8        | 12                           | 13       | 37                    | 20       | 156        | 124       |     |
| 3                            | 5        | 13                           | 13        | 19                           | 18        | 17                           | 10       | 19                           | 15       | 65                    | 31       | 168        | 114       |     |
| 14                           | 9        | 16                           | 7         | 12                           | 2         | 7                            | 4        | 5                            | 1        | 13                    | 8        | 126        | 82        |     |
| 35                           | 71       | 64                           | 58        | 68                           | 70        | 49                           | 77       | 34                           | 57       | 94                    | 90       | 1,791      | 1,512     |     |
| 182                          | 184      | 376                          | 434       | 398                          | 482       | 369                          | 437      | 480                          | 409      | 1,182                 | 905      | 6,658      | 6,053     |     |
| 4                            | 2        | 5                            | 2         | 5                            | 2         | 4                            | 1        | 2                            | ...      | 1                     | ...      | 28         | 13        |     |
| 6                            | 5        | 3                            | 1         | 3                            | ...       | ...                          | ...      | ...                          | ...      | ...                   | ...      | 67         | 65        |     |
| 29                           | 27       | 36                           | 29        | 31                           | 25        | 32                           | 16       | 22                           | 18       | 15                    | 10       | 203        | 181       |     |
| 381                          | 400      | 735                          | 711       | 749                          | 739       | 713                          | 655      | 727                          | 578      | 1,200                 | 988      | 8,038      | 7,200     | 26  |
| 10                           | 8        | 10                           | 8         | 7                            | 8         | 13                           | 5        | 15                           | 6        | 18                    | 5        | 164        | 115       |     |
| 34                           | 70       | 62                           | 77        | 44                           | 33        | 25                           | 18       | 34                           | 19       | 73                    | 30       | 339        | 312       |     |
| 27                           | 12       | 21                           | 13        | 21                           | 9         | 21                           | 10       | 16                           | 9        | 21                    | 7        | 202        | 115       |     |
| 82                           | 76       | 102                          | 80        | 97                           | 87        | 85                           | 90       | 108                          | 92       | 159                   | 135      | 1,765      | 1,562     |     |
| 573                          | 600      | 994                          | 921       | 957                          | 903       | 923                          | 793      | 924                          | 715      | 1,486                 | 1,175    | 11,466     | 10,203    |     |
| ...                          | ...      | ...                          | ...       | ...                          | ...       | ...                          | ...      | ...                          | ...      | ...                   | ...      | ...        | ...       |     |
| 1                            | 1        | 2                            | ...       | 2                            | 1         | ...                          | ...      | 1                            | ...      | ...                   | ...      | 13         | 4         |     |
| 248                          | 187      | 712                          | 755       | 780                          | 797       | 763                          | 634      | 699                          | 443      | 1,253                 | 901      | 7,068      | 5,994     | 27  |
| ...                          | ...      | 1                            | 1         | 3                            | 1         | 6                            | 2        | 2                            | ...      | 5                     | 6        | 41         | 29        |     |
| 8                            | 7        | 16                           | 18        | 17                           | 11        | 17                           | 4        | 18                           | 7        | 31                    | 16       | 137        | 75        |     |
| 8                            | 1        | 25                           | 9         | 21                           | 9         | 18                           | 6        | 11                           | 4        | 10                    | 5        | 163        | 86        |     |
| 3                            | 12       | 11                           | 63        | 13                           | 53        | 17                           | 18       | 16                           | 6        | 16                    | 7        | 579        | 608       |     |
| 268                          | 208      | 707                          | 846       | 836                          | 872       | 821                          | 664      | 747                          | 460      | 1,315                 | 936      | 7,984      | 6,798     |     |
| 5                            | 2        | 8                            | 6         | 7                            | 5         | 5                            | 8        | 3                            | 10       | ...                   | ...      | 34         | 33        |     |
| ...                          | 2        | ...                          | ...       | ...                          | ...       | ...                          | ...      | ...                          | ...      | ...                   | ...      | 9          | 7         |     |
| 134                          | 123      | 469                          | 479       | 671                          | 514       | 529                          | 389      | 502                          | 300      | 878                   | 565      | 5,340      | 4,143     |     |
| ...                          | ...      | 5                            | 4         | 8                            | 3         | 7                            | 6        | 4                            | 3        | 2                     | 3        | 36         | 24        |     |
| 8                            | 3        | 5                            | 4         | 10                           | 5         | 11                           | 6        | 5                            | 4        | 8                     | 6        | 65         | 37        |     |
| 6                            | 3        | 9                            | 2         | 3                            | 1         | 8                            | 2        | 9                            | 3        | 10                    | 4        | 80         | 29        |     |
| 16                           | 21       | 61                           | 52        | 52                           | 67        | 50                           | 50       | 58                           | 41       | 30                    | 44       | 529        | 472       |     |
| 169                          | 154      | 561                          | 547       | 751                          | 595       | 610                          | 461      | 562                          | 361      | 928                   | 622      | 6,094      | 4,745     |     |
| 531                          | 373      | 866                          | 638       | 757                          | 584       | 553                          | 493      | 331                          | 253      | 363                   | 223      | 4,856      | 3,705     |     |
| 360                          | 372      | 335                          | 354       | 271                          | 235       | 177                          | 143      | 92                           | 51       | 56                    | 55       | 8,103      | 7,262     |     |
| 618                          | 657      | 937                          | 989       | 861                          | 850       | 655                          | 661      | 462                          | 523      | 361                   | 359      | 5,390      | 5,678     |     |
| 5,998                        | 5,583    | 13,488                       | 14,366    | 12,904                       | 13,654    | 13,916                       | 11,547   | 14,695                       | 10,552   | 36,356                | 27,076   | 192,459    | 172,586   |     |
| 315                          | 268      | 327                          | 289       | 337                          | 305       | 384                          | 300      | 453                          | 321      | 640                   | 424      | 4,830      | 3,809     |     |
| 1,059                        | 916      | 1,812                        | 1,637     | 2,000                        | 1,648     | 1,969                        | 1,283    | 2,095                        | 1,498    | 3,236                 | 2,418    | 21,011     | 16,892    |     |
| 373                          | 222      | 614                          | 310       | 584                          | 317       | 485                          | 298      | 353                          | 170      | 435                   | 220      | 4,392      | 2,504     |     |
| 1,328                        | 1,232    | 1,850                        | 1,886     | 1,842                        | 1,805     | 1,634                        | 1,447    | 1,733                        | 1,456    | 2,631                 | 2,371    | 50,425     | 44,458    |     |
| 10,282                       | 9,623    | 20,319                       | 20,409    | 19,556                       | 19,338    | 19,773                       | 16,142   | 20,114                       | 14,849   | 44,048                | 33,145   | 291,266    | 256,804   |     |
| 994,090                      | 725,863  | 1,885,914                    | 1,581,886 | 1,446,929                    | 1,197,335 | 1,065,657                    | 894,099  | 711,241                      | 544,726  | 662,471               | 610,371  | 10,668,101 | 8,729,045 |     |
| 0.53                         | 0.51     | 0.46                         | 0.40      | 0.52                         | 0.49      | 0.52                         | 0.55     | 0.47                         | 0.47     | 0.55                  | 0.44     | 0.46       | 0.42      |     |
| 0.36                         | 0.51     | 0.20                         | 0.22      | 0.19                         | 0.20      | 0.17                         | 0.16     | 0.13                         | 0.13     | 0.08                  | 0.11     | 0.06       | 0.03      |     |
| 0.62                         | 0.90     | 0.49                         | 0.62      | 0.59                         | 0.71      | 0.61                         | 0.74     | 0.65                         | 0.98     | 0.54                  | 0.70     | 0.51       | 0.65      |     |
| 5.73                         | 7.68     | 7.15                         | 9.04      | 8.91                         | 11.40     | 13.06                        | 12.94    | 20.52                        | 19.37    | 54.88                 | 53.05    | 18.14      | 19.77     |     |
| 0.32                         | 0.37     | 0.17                         | 0.18      | 0.23                         | 0.25      | 0.36                         | 0.34     | 0.34                         | 0.39     | 0.27                  | 0.23     | 0.45       | 0.44      |     |
| 1.47                         | 1.26     | 0.98                         | 1.04      | 1.38                         | 1.38      | 1.85                         | 1.43     | 1.94                         | 2.75     | 4.88                  | 4.74     | 1.04       | 1.92      |     |
| 0.38                         | 0.31     | 0.33                         | 0.20      | 0.40                         | 0.26      | 0.46                         | 0.33     | 0.50                         | 0.31     | 0.61                  | 0.43     | 0.41       | 0.29      |     |
| 1.34                         | 1.69     | 0.98                         | 1.20      | 1.27                         | 1.51      | 1.53                         | 1.62     | 2.44                         | 2.67     | 3.97                  | 4.65     | 4.74       | 5.09      |     |
| 10.34                        | 13.24    | 10.77                        | 12.90     | 13.52                        | 16.20     | 18.55                        | 18.5     | 28.28                        | 27.46    | 66.49                 | 64.94    | 27.46      | 29.41     |     |

excluded, as it is not shown separately in the census returns.

available, the ratios shown in columns 5 to 14 are calculated under the orders of the Local Government on the population of the Punjab as constituted by notification No. 2943-S, dated 1st October 1913.



## ANNUAL FORM No. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1919.

| 1                           | 2                   | 3                                       |           |                    |                |            | 4                            |         |                    |                |         | 5  |         |                    |                |        |
|-----------------------------|---------------------|---|-----------|--------------------|----------------|------------|------------------------------|---------|--------------------|----------------|---------|--|---------|--------------------|----------------|--------|
| No.                         | DISTRICTS.          | POPULATION ACCORDING TO CENSUS OF 1911. |           |                    |                |            | NUMBER OF DEATHS REGISTERED. |         |                    |                |         | RATIO OF DEATHS PER 1,000 OF POPULATION. |         |                    |                |        |
|                             |                     | Muhammadians.                           | Hindus.   | Indian Christians. | Other classes. | Total.     | Muhammadians.                | Hindus. | Indian Christians. | Other classes. | Total.  | Muhammadians.                            | Hindus. | Indian Christians. | Other classes. | Total. |
| 1                           | 2                   | 3                                       | 4         | 5                  | 6              | 7          | 8                            | 9       | 10                 | 11             | 12      | 13                                       | 14      | 15                 | 16             | 17     |
| <b>AMBALA DIVISION.</b>     |                     |   |           |                    |                |            |                              |         |                    |                |         |  |         |                    |                |        |
| 1                           | Hissar ...          | 21,600                                  | 585,995   | 79                 | 215            | 804,889    | 6,365                        | 16,279  | ...                | ...            | 22,644  | 29.12                                    | 27.78   | ...                | ...            | 18.13  |
| 2                           | Rohtak ...          | 113,493                                 | 600,168   | 1,136              | 37             | 714,834    | 4,793                        | 20,178  | 14                 | 1              | 24,986  | 42.23                                    | 33.62   | 12.32              | 27.03          | 34.95  |
| 3                           | Gurgaon ...         | 235,653                                 | 492,684   | 687                | 143            | 729,167    | 9,988                        | 18,394  | 5                  | 26             | 28,413  | 42.38                                    | 37.33   | 7.28               | 181.82         | 38.97  |
| 4                           | Karnal ...          | 224,920                                 | 573,947   | 846                | 84             | 799,787    | 9,178                        | 18,953  | 3                  | 5              | 28,139  | 40.81                                    | 33.02   | 3.59               | 59.53          | 35.18  |
| 5                           | Ambala ...          | 188,252                                 | 443,202   | 745                | 354            | 632,553    | 6,415                        | 13,933  | 9                  | ...            | 20,262  | 33.55                                    | 31.45   | 12.08              | ...            | 32.08  |
| 6                           | Simla ...           | 4,775                                   | 27,093    | 533                | 2,569          | 34,970     | 191                          | 865     | 10                 | ...            | 1,066   | 40.00                                    | 29.71   | 18.76              | ...            | 28.77  |
| <b>JULLUNDER DIVISION.</b>  |                     |   |           |                    |                |            |                              |         |                    |                |         |  |         |                    |                |        |
| 7                           | Kangra ...          | 38,770                                  | 723,570   | 221                | 4,125          | 766,686    | 910                          | 23,382  | 3                  | ...            | 24,295  | 23.47                                    | 22.31   | 13.57              | ...            | 31.69  |
| 8                           | Hoshiarpur ...      | 281,805                                 | 623,786   | 2,954              | 21             | 918,569    | 7,588                        | 17,566  | 21                 | ...            | 25,165  | 26.93                                    | 27.70   | 7.11               | ...            | 27.40  |
| 9                           | Jullunder ...       | 352,329                                 | 434,503   | 1,107              | 17             | 787,956    | 9,164                        | 10,461  | 2                  | ...            | 19,627  | 26.61                                    | 24.08   | 1.81               | ...            | 24.91  |
| 10                          | Ludhiana ...        | 176,043                                 | 340,231   | 731                | 157            | 517,192    | 5,101                        | 8,550   | 15                 | ...            | 13,666  | 28.93                                    | 25.13   | 20.51              | ...            | 26.42  |
| 11                          | Ferozepore ...      | 408,330                                 | 524,053   | 915                | 148            | 933,499    | 12,552                       | 13,254  | 8                  | ...            | 25,814  | 30.74                                    | 35.29   | 8.74               | ...            | 27.65  |
| <b>LAHORE DIVISION.</b>     |                     |   |           |                    |                |            |                              |         |                    |                |         |  |         |                    |                |        |
| 12                          | Lahore ...          | 619,735                                 | 377,923   | 15,972             | 4,107          | 1,017,742  | 19,572                       | 8,688   | 433                | ...            | 28,693  | 31.58                                    | 32.99   | 27.11              | ...            | 28.19  |
| 13                          | Amritsar ...        | 408,571                                 | 466,262   | 4,189              | 319            | 879,311    | 11,166                       | 12,908  | 104                | 2              | 24,180  | 27.33                                    | 27.69   | 24.83              | 5.73           | 27.50  |
| 14                          | Gurdaspur ...       | 407,701                                 | 401,623   | 23,063             | 164            | 832,561    | 10,645                       | 10,291  | 522                | 15             | 21,473  | 26.11                                    | 25.62   | 22.63              | 91.45          | 25.79  |
| 15                          | Sialkot ...         | 599,840                                 | 317,942   | 45,727             | 270            | 963,779    | 15,688                       | 7,535   | 1,308              | 22             | 24,553  | 26.17                                    | 13.79   | 28.60              | 81.48          | 25.52  |
| 16                          | Gujranwala ...      | 622,430                                 | 284,773   | 16,117             | 99             | 923,419    | 20,813                       | 6,719   | 836                | 49             | 27,757  | 33.50                                    | 21.14   | 51.37              | 494.95         | 30.06  |
| <b>RAWALPINDI DIVISION.</b> |                     |   |           |                    |                |            |                              |         |                    |                |         |  |         |                    |                |        |
| 17                          | Gujrat ...          | 650,893                                 | 94,171    | 463                | 107            | 745,634    | 18,363                       | 2,405   | 22                 | 27             | 20,817  | 28.21                                    | 15.54   | 47.52              | 352.34         | 27.92  |
| 18                          | Shahpur ...         | 572,565                                 | 106,166   | 8,419              | 223            | 687,366    | 12,471                       | 2,026   | 251                | ...            | 14,748  | 21.78                                    | 19.09   | 29.81              | ...            | 21.46  |
| 19                          | Jhelum ...          | 449,553                                 | 54,364    | 151                | 127            | 504,195    | 12,060                       | 1,513   | 6                  | ...            | 13,579  | 26.83                                    | 27.83   | 39.78              | ...            | 26.93  |
| 20                          | Rawalpindi ...      | 442,090                                 | 64,209    | 932                | 411            | 507,642    | 11,792                       | 2,216   | 36                 | 12             | 14,066  | 26.67                                    | 24.73   | 33.63              | 29.05          | 27.71  |
| 21                          | Attock ...          | 470,155                                 | 45,071    | 31                 | 29             | 515,286    | 13,932                       | 1,289   | ...                | ...            | 15,211  | 29.61                                    | 28.60   | ...                | ...            | 19.52  |
| 22                          | Mianwali ...        | 299,971                                 | 41,293    | 91                 | 77             | 341,377    | 8,458                        | 1,107   | 1                  | ...            | 9,566   | 28.20                                    | 26.84   | 10.99              | ...            | 28.02  |
| <b>MULTAN DIVISION.</b>     |                     |   |           |                    |                |            |                              |         |                    |                |         |  |         |                    |                |        |
| 23                          | Montgomery ...      | 376,174                                 | 127,368   | 459                | 114            | 504,115    | 12,147                       | 3,691   | 122                | 42             | 16,062  | 32.29                                    | 28.98   | 266.79             | 368.41         | 31.74  |
| 24                          | Lyallpur ...        | 547,837                                 | 309,021   | 31,889             | 148            | 888,895    | 14,289                       | 7,972   | 1,084              | 32             | 23,377  | 26.09                                    | 25.60   | 34.02              | 216.22         | 26.80  |
| 25                          | Jhang ...           | 422,468                                 | 92,857    | 177                | 24             | 515,526    | 10,224                       | 2,482   | 2                  | 3              | 12,711  | 24.20                                    | 26.73   | 11.30              | 125.00         | 24.66  |
| 26                          | Multan ...          | 660,320                                 | 140,359   | 384                | 312            | 801,375    | 17,641                       | 3,903   | 117                | 8              | 21,669  | 26.72                                    | 27.81   | 304.69             | 25.64          | 27.04  |
| 27                          | Muzaffargarh ...    | 494,915                                 | 74,481    | 40                 | 25             | 569,461    | 12,847                       | 1,985   | ...                | ...            | 14,782  | 25.96                                    | 25.98   | ...                | ...            | 25.96  |
| 28                          | Dera Ghazi Khan ... | 442,234                                 | 57,550    | 25                 | 51             | 499,860    | 9,613                        | 1,220   | 2                  | 4              | 10,839  | 21.74                                    | 21.20   | 80.00              | 78.43          | 21.68  |
| Total for the Province.     |                     | 10,729,972                              | 8,434,533 | 158,078            | 14,513         | 19,387,146 | 303,596                      | 233,990 | 4,936              | 248            | 518,070 | 29.32                                    | 25.33   | 31.22              | *17.02         | 26.34  |

\* Figures incorrect due to misclassification.



ANNUAL FORM

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1919.

ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1919.

| District |      | Rural Circles |      | Deaths |     | Total |     |
|----------|------|---------------|------|--------|-----|-------|-----|
| No.      | Name | No.           | Name | No.    | Sex | No.   | Sex |
| 1        |      | 1             |      | 1      |     | 1     |     |
| 2        |      | 2             |      | 2      |     | 2     |     |
| 3        |      | 3             |      | 3      |     | 3     |     |
| 4        |      | 4             |      | 4      |     | 4     |     |
| 5        |      | 5             |      | 5      |     | 5     |     |
| 6        |      | 6             |      | 6      |     | 6     |     |
| 7        |      | 7             |      | 7      |     | 7     |     |
| 8        |      | 8             |      | 8      |     | 8     |     |
| 9        |      | 9             |      | 9      |     | 9     |     |
| 10       |      | 10            |      | 10     |     | 10    |     |
| 11       |      | 11            |      | 11     |     | 11    |     |
| 12       |      | 12            |      | 12     |     | 12    |     |
| 13       |      | 13            |      | 13     |     | 13    |     |
| 14       |      | 14            |      | 14     |     | 14    |     |
| 15       |      | 15            |      | 15     |     | 15    |     |
| 16       |      | 16            |      | 16     |     | 16    |     |
| 17       |      | 17            |      | 17     |     | 17    |     |
| 18       |      | 18            |      | 18     |     | 18    |     |
| 19       |      | 19            |      | 19     |     | 19    |     |
| 20       |      | 20            |      | 20     |     | 20    |     |
| 21       |      | 21            |      | 21     |     | 21    |     |
| 22       |      | 22            |      | 22     |     | 22    |     |
| 23       |      | 23            |      | 23     |     | 23    |     |
| 24       |      | 24            |      | 24     |     | 24    |     |
| 25       |      | 25            |      | 25     |     | 25    |     |
| 26       |      | 26            |      | 26     |     | 26    |     |
| 27       |      | 27            |      | 27     |     | 27    |     |
| 28       |      | 28            |      | 28     |     | 28    |     |
| 29       |      | 29            |      | 29     |     | 29    |     |
| 30       |      | 30            |      | 30     |     | 30    |     |
| 31       |      | 31            |      | 31     |     | 31    |     |
| 32       |      | 32            |      | 32     |     | 32    |     |
| 33       |      | 33            |      | 33     |     | 33    |     |
| 34       |      | 34            |      | 34     |     | 34    |     |
| 35       |      | 35            |      | 35     |     | 35    |     |
| 36       |      | 36            |      | 36     |     | 36    |     |
| 37       |      | 37            |      | 37     |     | 37    |     |
| 38       |      | 38            |      | 38     |     | 38    |     |
| 39       |      | 39            |      | 39     |     | 39    |     |
| 40       |      | 40            |      | 40     |     | 40    |     |
| 41       |      | 41            |      | 41     |     | 41    |     |
| 42       |      | 42            |      | 42     |     | 42    |     |
| 43       |      | 43            |      | 43     |     | 43    |     |
| 44       |      | 44            |      | 44     |     | 44    |     |
| 45       |      | 45            |      | 45     |     | 45    |     |
| 46       |      | 46            |      | 46     |     | 46    |     |
| 47       |      | 47            |      | 47     |     | 47    |     |
| 48       |      | 48            |      | 48     |     | 48    |     |
| 49       |      | 49            |      | 49     |     | 49    |     |
| 50       |      | 50            |      | 50     |     | 50    |     |
| 51       |      | 51            |      | 51     |     | 51    |     |
| 52       |      | 52            |      | 52     |     | 52    |     |
| 53       |      | 53            |      | 53     |     | 53    |     |
| 54       |      | 54            |      | 54     |     | 54    |     |
| 55       |      | 55            |      | 55     |     | 55    |     |
| 56       |      | 56            |      | 56     |     | 56    |     |
| 57       |      | 57            |      | 57     |     | 57    |     |
| 58       |      | 58            |      | 58     |     | 58    |     |
| 59       |      | 59            |      | 59     |     | 59    |     |
| 60       |      | 60            |      | 60     |     | 60    |     |
| 61       |      | 61            |      | 61     |     | 61    |     |
| 62       |      | 62            |      | 62     |     | 62    |     |
| 63       |      | 63            |      | 63     |     | 63    |     |
| 64       |      | 64            |      | 64     |     | 64    |     |
| 65       |      | 65            |      | 65     |     | 65    |     |
| 66       |      | 66            |      | 66     |     | 66    |     |
| 67       |      | 67            |      | 67     |     | 67    |     |
| 68       |      | 68            |      | 68     |     | 68    |     |
| 69       |      | 69            |      | 69     |     | 69    |     |
| 70       |      | 70            |      | 70     |     | 70    |     |
| 71       |      | 71            |      | 71     |     | 71    |     |
| 72       |      | 72            |      | 72     |     | 72    |     |
| 73       |      | 73            |      | 73     |     | 73    |     |
| 74       |      | 74            |      | 74     |     | 74    |     |
| 75       |      | 75            |      | 75     |     | 75    |     |
| 76       |      | 76            |      | 76     |     | 76    |     |
| 77       |      | 77            |      | 77     |     | 77    |     |
| 78       |      | 78            |      | 78     |     | 78    |     |
| 79       |      | 79            |      | 79     |     | 79    |     |
| 80       |      | 80            |      | 80     |     | 80    |     |
| 81       |      | 81            |      | 81     |     | 81    |     |
| 82       |      | 82            |      | 82     |     | 82    |     |
| 83       |      | 83            |      | 83     |     | 83    |     |
| 84       |      | 84            |      | 84     |     | 84    |     |
| 85       |      | 85            |      | 85     |     | 85    |     |
| 86       |      | 86            |      | 86     |     | 86    |     |
| 87       |      | 87            |      | 87     |     | 87    |     |
| 88       |      | 88            |      | 88     |     | 88    |     |
| 89       |      | 89            |      | 89     |     | 89    |     |
| 90       |      | 90            |      | 90     |     | 90    |     |
| 91       |      | 91            |      | 91     |     | 91    |     |
| 92       |      | 92            |      | 92     |     | 92    |     |
| 93       |      | 93            |      | 93     |     | 93    |     |
| 94       |      | 94            |      | 94     |     | 94    |     |
| 95       |      | 95            |      | 95     |     | 95    |     |
| 96       |      | 96            |      | 96     |     | 96    |     |
| 97       |      | 97            |      | 97     |     | 97    |     |
| 98       |      | 98            |      | 98     |     | 98    |     |
| 99       |      | 99            |      | 99     |     | 99    |     |
| 100      |      | 100           |      | 100    |     | 100   |     |



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

| 1                             | 2                   | 3                                       | 4        | 5          | 6       | 7       | 8                        | 9                     | 10        |          |                       |                                       |         |        |
|-------------------------------|---------------------|---|----------|------------|---------|---------|--------------------------|-----------------------|-----------|----------|-----------------------|---------------------------------------|---------|--------|
| No.                           | A.—RURAL CIRCLES.   | Population according to Census of 1911. | Cholera. | Small-pox. | Plague. | Fever.  | Dysentery and Diarrhoea. | Respiratory diseases. | INJURIES. |          |                       |                                       |         |        |
|                               |                     |   |          |            |         |         |                          |                       | Suicides. |          | Wounds and accidents. | Snake-bite and killed by wild beasts. | Rabies. | Total. |
|                               |                     |   |          |            |         |         |                          |                       | Males.    | Females. |                       |                                       |         |        |
| 1                             | 2                   | 3                                       | 4        | 5          | 6       | 7       | 8                        | 9                     | 10        | 11       | 12                    | 13                                    | 14      | 15     |
| AMBALA DIVISION.              |                     |   |          |            |         |         |                          |                       |           |          |                       |                                       |         |        |
| 1                             | Hissar ...          | 725,016                                 | 27       | 1,008      | 409     | 14,533  | 165                      | 377                   | 3         | 6        | 163                   | 23                                    | 1       | 196    |
| 2                             | Rohtak ...          | 654,115                                 | 62       | 48         | 3,087   | 13,742  | 177                      | 802                   | 9         | 56       | 222                   | 10                                    | ...     | 297    |
| 3                             | Gurgaon ...         | 675,175                                 | 472      | 71         | 61      | 17,528  | 289                      | 814                   | 11        | 27       | 169                   | 14                                    | ...     | 221    |
| 4                             | Karnal ...          | 723,742                                 | 291      | 330        | 14      | 18,504  | 119                      | 859                   | 3         | 5        | 203                   | 34                                    | 9       | 254    |
| 5                             | Ambala ...          | 577,034                                 | 30       | 201        | 61      | 12,879  | 244                      | 2,576                 | 4         | 4        | 119                   | 19                                    | 9       | 155    |
| 6                             | Simla ...           | 16,036                                  | ...      | 6          | ...     | 229     | 33                       | 92                    | ...       | ...      | 1                     | 1                                     | ...     | 2      |
| JULLUNDUR DIVISION.           |                     |   |          |            |         |         |                          |                       |           |          |                       |                                       |         |        |
| 7                             | Kangra ...          | 760,548                                 | 14       | 118        | ...     | 16,314  | 456                      | 3,503                 | 7         | 6        | 244                   | 24                                    | ...     | 231    |
| 8                             | Hoshiarpur ...      | 864,823                                 | 13       | 1,784      | 72      | 16,420  | 30                       | 1,991                 | 5         | 3        | 161                   | 18                                    | 9       | 193    |
| 9                             | Jullundur ...       | 691,816                                 | 71       | 249        | 119     | 12,126  | 109                      | 979                   | 3         | 6        | 199                   | 2                                     | 13      | 223    |
| 10                            | Ludhiana ...        | 448,172                                 | 8        | 493        | 62      | 6,422   | 93                       | 647                   | ...       | 2        | 108                   | 5                                     | 6       | 121    |
| 11                            | Ferozepore ...      | 869,652                                 | 199      | 1,562      | 1,127   | 14,196  | 165                      | 988                   | 13        | 4        | 192                   | 17                                    | 3       | 229    |
| LAHORE DIVISION.              |                     |   |          |            |         |         |                          |                       |           |          |                       |                                       |         |        |
| 12                            | Lahore ...          | 744,424                                 | 311      | 993        | 1,492   | 11,441  | 112                      | 486                   | 1         | 1        | 206                   | 20                                    | 5       | 233    |
| 13                            | Amritsar ...        | 711,530                                 | 339      | 422        | 13      | 13,580  | 167                      | 846                   | 8         | 2        | 190                   | 7                                     | 13      | 220    |
| 14                            | Gurdaspur ...       | 784,343                                 | 11       | 430        | 94      | 11,246  | 433                      | 5,018                 | 2         | 2        | 169                   | 19                                    | 9       | 201    |
| 15                            | Sialkot ...         | 855,399                                 | 19       | 629        | 211     | 14,361  | 376                      | 2,352                 | 5         | 1        | 203                   | 23                                    | 5       | 237    |
| 16                            | Gujranwala ...      | 831,694                                 | 733      | 128        | 271     | 19,828  | 70                       | 262                   | 3         | 3        | 262                   | 94                                    | 6       | 268    |
| RAWALPINDI DIVISION.          |                     |   |          |            |         |         |                          |                       |           |          |                       |                                       |         |        |
| 17                            | Gujrat ...          | 702,886                                 | 196      | 366        | 26      | 14,337  | 210                      | 1,309                 | ...       | ...      | 197                   | 25                                    | ...     | 222    |
| 18                            | Shahpur ...         | 630,940                                 | 229      | 339        | 58      | 9,347   | 128                      | 498                   | ...       | 1        | 218                   | 25                                    | 2       | 246    |
| 19                            | Jhelum ...          | 461,307                                 | 98       | 837        | 256     | 8,180   | 144                      | 898                   | 2         | ...      | 136                   | 24                                    | 3       | 165    |
| 20                            | Rawalpindi ...      | 459,639                                 | 464      | 158        | 23      | 7,266   | 1,443                    | 1,031                 | 3         | 2        | 221                   | 34                                    | 1       | 261    |
| 21                            | Attock ...          | 493,291                                 | 1,992    | 254        | 755     | 9,164   | 39                       | 514                   | 1         | ...      | 155                   | 17                                    | ...     | 173    |
| 22                            | Mianwali ...        | 316,243                                 | 311      | 12         | 4       | 6,662   | 111                      | 240                   | 3         | 1        | 92                    | 7                                     | ...     | 103    |
| MULTAN DIVISION.              |                     |   |          |            |         |         |                          |                       |           |          |                       |                                       |         |        |
| 23                            | Montgomery ...      | 479,837                                 | ...      | 1,245      | 893     | 10,858  | 30                       | 65                    | 2         | 3        | 172                   | 51                                    | 1       | 229    |
| 24                            | Lyallpur ...        | 863,900                                 | 1,371    | 1,110      | 302     | 14,195  | 318                      | 624                   | 1         | 1        | 257                   | 40                                    | 20      | 319    |
| 25                            | Jhang ...           | 475,527                                 | 87       | 110        | 25      | 7,670   | 150                      | 205                   | 2         | 1        | 142                   | 41                                    | 1       | 187    |
| 26                            | Multan ...          | 709,294                                 | 41       | 80         | 95      | 15,024  | 55                       | 181                   | 1         | ...      | 242                   | 54                                    | ...     | 297    |
| 27                            | Muzaffargarh ...    | 547,065                                 | 1        | 10         | ...     | 12,589  | 15                       | 134                   | 6         | ...      | 141                   | 88                                    | ...     | 235    |
| 28                            | Dera Ghazi Khan ... | 463,304                                 | 60       | 10         | ...     | 8,859   | 23                       | 66                    | 1         | 2        | 71                    | 31                                    | 1       | 106    |
| Total of the Rural Circles... |                     | 17,559,932                              | 7,441    | 13,003     | 9,620   | 337,505 | 5,777                    | 28,357                | 99        | 139      | 4,855                 | 767                                   | 117     | 6,977  |



## (RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1919.

| 11                | 12                            | 13                                       |            |         |        |                          |                       |           |                   | 14               |                                    | 15  |
|-------------------|-------------------------------|--|------------|---------|--------|--------------------------|-----------------------|-----------|-------------------|------------------|------------------------------------|-----|
| All other causes. | Total deaths from all causes. | RATIO OF DEATHS PER 1,000 OF POPULATION. |            |         |        |                          |                       |           |                   | FROM ALL CAUSES. |                                    | No. |
|                   |                               | Cholera.                                 | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | Injuries. | All other causes. | For the year.    | Mean ratio of previous five years. |     |
| 16                | 17                            | 18                                       | 19         | 20      | 21     | 22                       | 23                    | 24        | 25                | 26               | 27                                 | 28  |
| 2,943             | 19,718                        | 0.04                                     | 1.38       | 0.65    | 20.05  | 0.23                     | 0.52                  | 0.27      | 4.06              | 27.20            | 43.85                              | 1   |
| 4,204             | 22,419                        | 0.09                                     | 0.07       | 4.72    | 21.01  | 0.27                     | 1.23                  | 0.45      | 6.43              | 34.27            | 46.75                              | 2   |
| 6,833             | 26,289                        | 0.70                                     | 0.11       | 0.09    | 25.96  | 0.43                     | 1.21                  | 0.33      | 10.12             | 38.94            | 59.78                              | 3   |
| 4,882             | 25,263                        | 0.40                                     | 0.46       | 0.02    | 25.57  | 0.16                     | 1.20                  | 0.35      | 6.75              | 34.91            | 46.53                              | 4   |
| 2,424             | 18,570                        | 0.05                                     | 0.35       | 0.11    | 22.32  | 0.42                     | 4.46                  | 0.27      | 4.20              | 32.18            | 43.73                              | 5   |
| 106               | 468                           | ...                                      | 0.37       | ...     | 14.28  | 2.06                     | 5.74                  | 0.12      | 6.61              | 29.18            | 28.10                              | 6   |
| 3,488             | 24,174                        | 0.02                                     | 0.16       | ...     | 21.45  | 0.60                     | 4.61                  | 0.37      | 4.59              | 31.78            | 35.92                              | 7   |
| 3,008             | 23,515                        | 0.02                                     | 2.06       | 0.08    | 18.99  | 0.03                     | 2.30                  | 0.23      | 3.48              | 27.19            | 37.44                              | 8   |
| 2,983             | 16,889                        | 0.10                                     | 0.33       | 0.22    | 17.53  | 0.16                     | 1.42                  | 0.32      | 4.31              | 24.41            | 41.54                              | 9   |
| 3,542             | 11,388                        | 0.02                                     | 1.10       | 0.14    | 14.33  | 0.21                     | 1.44                  | 0.27      | 7.90              | 25.41            | 49.47                              | 10  |
| 5,492             | 23,949                        | 0.22                                     | 1.80       | 1.30    | 16.32  | 0.19                     | 1.14                  | 0.26      | 6.32              | 27.54            | 43.14                              | 11  |
| 4,336             | 19,409                        | 0.42                                     | 1.34       | 2.00    | 15.37  | 0.15                     | 0.65                  | 0.31      | 5.82              | 26.07            | 46.62                              | 12  |
| 2,633             | 18,220                        | 0.48                                     | 0.59       | 0.05    | 19.09  | 0.23                     | 1.19                  | 0.31      | 3.70              | 25.61            | 47.92                              | 13  |
| 2,574             | 20,007                        | 0.01                                     | 0.55       | 0.12    | 14.34  | 0.55                     | 6.40                  | 0.26      | 3.28              | 25.51            | 46.89                              | 14  |
| 3,248             | 21,433                        | 0.02                                     | 0.74       | 0.25    | 16.79  | 0.44                     | 2.75                  | 0.28      | 3.80              | 25.06            | 44.65                              | 15  |
| 2,795             | 24,455                        | 0.88                                     | 0.15       | 0.33    | 23.83  | 0.08                     | 0.31                  | 0.44      | 3.96              | 29.40            | 53.20                              | 16  |
| 2,556             | 19,222                        | 0.28                                     | 0.52       | 0.04    | 20.40  | 0.30                     | 1.86                  | 0.32      | 3.64              | 27.35            | 45.10                              | 17  |
| 2,350             | 13,185                        | 0.36                                     | 0.54       | 0.09    | 14.81  | 0.20                     | 0.77                  | 0.39      | 3.72              | 20.90            | 38.85                              | 18  |
| 2,034             | 12,612                        | 0.20                                     | 1.74       | 0.53    | 17.00  | 0.30                     | 1.87                  | 0.34      | 4.23              | 26.20            | 40.91                              | 19  |
| 1,681             | 11,727                        | 1.01                                     | 0.34       | 0.05    | 15.81  | 3.14                     | 2.24                  | 0.57      | 2.35              | 25.51            | 44.33                              | 20  |
| 1,739             | 14,639                        | 4.01                                     | 0.51       | 1.52    | 18.46  | 0.08                     | 1.04                  | 0.35      | 3.50              | 29.48            | 38.73                              | 21  |
| 1,337             | 8,780                         | 0.93                                     | 0.04       | 0.01    | 21.07  | 0.35                     | 0.76                  | 0.33      | 4.23              | 27.76            | 41.42                              | 22  |
| 1,979             | 15,299                        | ...                                      | 2.59       | 1.86    | 22.63  | 0.06                     | 0.14                  | 0.48      | 4.12              | 31.88            | 41.44                              | 23  |
| 4,463             | 22,702                        | 1.59                                     | 1.28       | 0.34    | 16.43  | 0.37                     | 0.72                  | 0.37      | 5.17              | 26.28            | 34.50                              | 24  |
| 2,842             | 11,276                        | 0.18                                     | 0.23       | 0.05    | 16.13  | 0.32                     | 0.43                  | 0.39      | 5.98              | 23.71            | 38.52                              | 25  |
| 2,550             | 18,323                        | 0.06                                     | 0.11       | 0.12    | 21.19  | 0.08                     | 0.26                  | 0.42      | 3.60              | 25.83            | 41.34                              | 26  |
| 991               | 13,975                        | 0.001                                    | 0.02       | ...     | 23.01  | 0.03                     | 0.15                  | 0.43      | 1.81              | 25.55            | 40.51                              | 27  |
| 719               | 9,846                         | 0.13                                     | 0.02       | ...     | 19.12  | 0.06                     | 0.14                  | 0.23      | 1.55              | 21.25            | 37.45                              | 28  |
| 80,133            | 487,743                       | 0.42                                     | 0.74       | 0.55    | 19.22  | 0.33                     | 1.62                  | 0.34      | 4.56              | 27.78            | 43.55                              |     |



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

| 1                            | 2           | 3                                       | 4        | 5          | 6       | 7      | 8                        | 9                     | 10        |          |                       |                                       |         |        |
|------------------------------|-------------|---|----------|------------|---------|--------|--------------------------|-----------------------|-----------|----------|-----------------------|---------------------------------------|---------|--------|
| No.                          | P.—Towns.   | Population according to Census of 1911. | Cholera. | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | INJURIES. |          |                       |                                       |         |        |
|                              |             |   |          |            |         |        |                          |                       | Suicide.  |          | Wounds and accidents. | Snake-bite and killed by wild beasts. | Rabies. | Total. |
|                              |             |   |          |            |         |        |                          |                       | Males.    | Females. |                       |                                       |         |        |
| 1                            | 2           | 3                                       | 4        | 5          | 6       | 7      | 8                        | 9                     | 10        | 11       | 12                    | 13                                    | 14      | 15     |
| <b>HISSAR DISTRICT.</b>      |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 1                            | Hissar      | 17,162                                  | ...      | 9          | 2       | 299    | 37                       | 112                   | ...       | ...      | 4                     | ...                                   | ...     | 4      |
| 2                            | Hansi       | 14,576                                  | ...      | 2          | ...     | 156    | 21                       | 68                    | ...       | 1        | 5                     | ...                                   | ...     | 6      |
| 3                            | Bhiwani     | 31,100                                  | ...      | 8          | 1       | 490    | 81                       | 137                   | ...       | ...      | 13                    | ...                                   | ...     | 13     |
| 4                            | Sirsa       | 14,829                                  | ...      | 40         | ...     | 220    | 22                       | 44                    | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 5                            | Patelabad   | 2,406                                   | ...      | 1          | ...     | 42     | 7                        | 4                     | ...       | ...      | 3                     | ...                                   | ...     | 3      |
| <b>ROHTAK DISTRICT.</b>      |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 6                            | Rohtak      | 19,382                                  | 11       | 1          | 8       | 323    | 32                       | 78                    | ...       | ...      | 7                     | ...                                   | ...     | 7      |
| 7                            | Jhajjar     | 10,817                                  | ...      | 1          | 1       | 95     | 29                       | 53                    | ...       | 1        | 4                     | ...                                   | 1       | 7      |
| 8                            | Beri        | 7,798                                   | ...      | 1          | 132     | 92     | 42                       | 33                    | ...       | ...      | 3                     | ...                                   | ...     | 3      |
| 9                            | Gohana      | 5,438                                   | ...      | ...        | ...     | 192    | 2                        | 32                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 10                           | Bahadurgarh | 4,990                                   | 2        | ...        | ...     | 162    | 15                       | 11                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 11                           | Sonepat     | 12,014                                  | ...      | 12         | ...     | 197    | 20                       | 43                    | 1         | ...      | 1                     | ...                                   | ...     | 2      |
| <b>GURGAON DISTRICT.</b>     |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 12                           | Bewari      | 24,780                                  | 32       | ...        | 7       | 116    | 74                       | 151                   | ...       | ...      | ...                   | 1                                     | ...     | 1      |
| 13                           | Palwal      | 9,485                                   | ...      | 1          | ...     | 270    | 75                       | 35                    | ...       | 1        | ...                   | ...                                   | ...     | 1      |
| 14                           | Pirozpur    | 5,719                                   | ...      | 1          | ...     | 122    | 10                       | 2                     | 2         | ...      | 1                     | 1                                     | ...     | 4      |
| 15                           | Hodal       | 5,458                                   | ...      | 18         | ...     | 132    | 23                       | 4                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 16                           | Ballabgarh  | 4,053                                   | ...      | 6          | ...     | 103    | 25                       | 6                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 17                           | Faridabad   | 4,487                                   | 1        | 1          | ...     | 138    | 13                       | 14                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| <b>KARNAL DISTRICT.</b>      |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 18                           | Karnal      | 21,018                                  | 62       | 1          | ...     | 564    | 49                       | 75                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 19                           | Kaithal     | 1,912                                   | 13       | 2          | 1       | 291    | 19                       | 38                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 20                           | Panipat     | 26,342                                  | ...      | 2          | ...     | 299    | 31                       | 78                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 21                           | Shakabad    | 11,074                                  | ...      | 1          | ...     | 114    | 11                       | 32                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 22                           | Thanesar    | 4,719                                   | 6        | 1          | ...     | 88     | 4                        | 7                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| <b>AMBALA DISTRICT.</b>      |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 23                           | Ambala      | 24,493                                  | 25       | 57         | ...     | 244    | 43                       | 154                   | 1         | ...      | 10                    | ...                                   | ...     | 11     |
| 24                           | Jaradhi     | 12,045                                  | 4        | 3          | ...     | 216    | 33                       | 83                    | 1         | ...      | 3                     | ...                                   | ...     | 4      |
| 25                           | Burys       | 4,252                                   | ...      | 4          | ...     | 83     | 3                        | 24                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 26                           | Sadhaura    | 7,774                                   | ...      | 8          | ...     | 90     | 25                       | 34                    | ...       | ...      | 1                     | 1                                     | ...     | 2      |
| 27                           | Rupar       | 6,935                                   | ...      | 9          | ...     | 59     | 20                       | 25                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| <b>SIMLA DISTRICT.</b>       |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 28                           | Simla       | 18,934                                  | ...      | 9          | ...     | 309    | 61                       | 13                    | ...       | ...      | 2                     | 1                                     | ...     | 3      |
| <b>KANGRA DISTRICT.</b>      |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 29                           | Kangra      | 3,020                                   | ...      | 4          | ...     | 28     | 7                        | 16                    | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 30                           | Dharmasala  | 2,518                                   | ...      | ...        | ...     | 26     | ...                      | 13                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| <b>HOSHIAURPUR DISTRICT.</b> |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 31                           | Hoshiarpur  | 10,980                                  | 2        | 41         | 2       | 185    | 9                        | 114                   | ...       | ...      | 7                     | ...                                   | ...     | 7      |
| 32                           | Khanpur     | 2,523                                   | ...      | 5          | ...     | 26     | ...                      | 7                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 33                           | Harina      | 5,305                                   | ...      | 22         | ...     | 71     | ...                      | 13                    | ...       | ...      | 1                     | ...                                   | ...     | ...    |
| 34                           | Garhdiwala  | 3,093                                   | ...      | 21         | ...     | 48     | 1                        | 14                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 35                           | Dasuya      | 3,197                                   | ...      | 17         | ...     | 88     | ...                      | 22                    | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 36                           | Tanda Umar  | 7,016                                   | ...      | 35         | ...     | 148    | ...                      | 36                    | ...       | ...      | ...                   | ...                                   | 2       | 2      |
| 37                           | Miani       | 4,870                                   | ...      | 1          | ...     | 98     | ...                      | 15                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 38                           | Mukerian    | 2,053                                   | ...      | 11         | 1       | 51     | 1                        | 17                    | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 39                           | Una         | 4,178                                   | 1        | 35         | ...     | 60     | ...                      | 7                     | ...       | ...      | 5                     | ...                                   | ...     | 5      |
| 40                           | Anandpur    | 4,041                                   | ...      | 21         | ...     | 57     | ...                      | 9                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| <b>JULLUNDUR DISTRICT.</b>   |             |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 41                           | Jullundur   | 55,354                                  | 46       | 43         | 1       | 652    | 112                      | 375                   | 1         | ...      | 23                    | 1                                     | 2       | 27     |
| 42                           | Kartarpur   | 8,631                                   | 4        | 31         | ...     | 110    | 8                        | 40                    | ...       | ...      | 3                     | 1                                     | 1       | 5      |
| 43                           | Bangah      | 4,602                                   | 1        | 4          | ...     | 61     | 13                       | 14                    | ...       | ...      | 1                     | 1                                     | ...     | 2      |
| 44                           | Rabon       | 6,292                                   | ...      | 2          | ...     | 146    | 5                        | 7                     | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 45                           | Phillaur    | 5,224                                   | 5        | 40         | ...     | 97     | 13                       | 22                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 46                           | Nurmahal    | 7,178                                   | ...      | 6          | ...     | 108    | 11                       | 50                    | 1         | ...      | 5                     | ...                                   | ...     | 6      |
| 47                           | Nakodar     | 8,859                                   | ...      | 24         | ...     | 98     | 8                        | 34                    | ...       | ...      | 3                     | ...                                   | ...     | 3      |



## No. VI—CONTINUED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1919—CONTINUED.

| 11                | 13                           | 13                                       |            |         |        |                          |                       |           |                   |                  |                                    | 14  |
|-------------------|------------------------------|--|------------|---------|--------|--------------------------|-----------------------|-----------|-------------------|------------------|------------------------------------|-----|
| All other causes. | Total deaths from all causes | RATIO OF DEATHS PER 1,000 OF POPULATION. |            |         |        |                          |                       |           |                   |                  |                                    | No. |
|                   |                              | Cholera.                                 | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | Injuries. | All other causes. | From all causes. |                                    |     |
|                   |                              |  |            |         |        |                          |                       |           |                   | For the year.    | Mean ratio of previous five years. |     |
| 16                | 17                           | 18                                       | 19         | 20      | 21     | 22                       | 23                    | 24        | 25                | 26               | 27                                 | 28  |
| 273               | 736                          | ...                                      | 0.52       | 0.12    | 17.42  | 2.16                     | 6.53                  | 0.23      | 15.91             | 42.69            | 48.55                              | 1   |
| 177               | 430                          | ...                                      | 0.14       | ...     | 10.70  | 1.44                     | 4.67                  | 0.41      | 12.14             | 29.50            | 59.03                              | 2   |
| 598               | 1,235                        | 0.06                                     | 0.26       | 0.03    | 15.76  | 2.61                     | 4.24                  | 0.42      | 16.33             | 39.71            | 53.36                              | 3   |
| 113               | 452                          | ...                                      | 2.73       | ...     | 15.04  | 1.91                     | 3.01                  | 0.14      | 8.07              | 30.90            | 48.06                              | 4   |
| 16                | 73                           | ...                                      | 0.42       | ...     | 17.46  | 2.91                     | 1.66                  | 1.25      | 6.65              | 30.34            | 28.35                              | 5   |
| 333               | 793                          | 0.55                                     | 0.05       | 0.40    | 16.26  | 1.61                     | 3.93                  | 0.35      | 16.77             | 39.93            | 47.03                              | 6   |
| 229               | 415                          | ...                                      | 0.09       | 0.09    | 8.95   | 2.73                     | 4.99                  | 0.66      | 21.57             | 39.09            | 53.97                              | 7   |
| 96                | 399                          | ...                                      | 0.13       | 10.33   | 11.80  | 5.39                     | 4.13                  | 0.38      | 12.31             | 51.17            | 62.76                              | 8   |
| 94                | 252                          | ...                                      | ...        | ...     | 22.43  | 0.37                     | 6.07                  | 0.18      | 17.19             | 46.34            | 59.95                              | 9   |
| 82                | 273                          | 0.40                                     | ...        | ...     | 32.46  | 3.01                     | 2.20                  | 0.20      | 16.43             | 54.71            | 57.15                              | 10  |
| 161               | 436                          | ...                                      | 1.00       | ...     | 16.40  | 1.66                     | 3.58                  | 0.17      | 13.40             | 36.21            | 44.86                              | 11  |
| 345               | 726                          | 1.29                                     | ...        | 0.28    | 4.68   | 2.99                     | 6.09                  | 0.04      | 13.92             | 29.30            | 39.85                              | 12  |
| 163               | 545                          | ...                                      | 0.11       | ...     | 28.47  | 7.91                     | 3.69                  | 0.11      | 17.19             | 57.46            | 67.26                              | 13  |
| 70                | 309                          | ...                                      | 0.17       | ...     | 21.33  | 1.75                     | 0.35                  | 0.76      | 12.24             | 36.54            | 66.20                              | 14  |
| 84                | 261                          | ...                                      | 3.29       | ...     | 24.14  | 4.11                     | 0.73                  | ...       | 15.36             | 47.73            | 70.78                              | 15  |
| 50                | 191                          | ...                                      | 1.48       | ...     | 25.41  | 6.41                     | 1.48                  | ...       | 12.34             | 47.13            | 49.84                              | 16  |
| 25                | 192                          | 0.22                                     | 0.22       | ...     | 30.76  | 2.90                     | 3.12                  | ...       | 5.57              | 42.79            | 62.49                              | 17  |
| 379               | 1,021                        | 2.95                                     | 0.05       | ...     | 26.36  | 2.33                     | 3.57                  | 0.05      | 13.27             | 45.58            | 47.76                              | 18  |
| 174               | 659                          | 1.01                                     | 1.70       | 0.08    | 12.54  | 1.47                     | 2.94                  | 0.08      | 13.48             | 43.19            | 50.46                              | 19  |
| 381               | 891                          | ...                                      | 0.08       | ...     | 15.15  | 1.18                     | 2.91                  | 0.04      | 14.46             | 33.66            | 64.62                              | 20  |
| 96                | 256                          | ...                                      | 0.09       | ...     | 10.31  | 1.00                     | 2.99                  | 0.09      | 8.68              | 23.16            | 36.95                              | 21  |
| 41                | 148                          | 1.27                                     | 0.21       | ...     | 18.65  | 0.85                     | 1.48                  | 0.21      | 8.69              | 31.36            | 36.41                              | 22  |
| 158               | 662                          | 1.02                                     | 2.33       | ...     | 9.96   | 1.76                     | 6.29                  | 0.45      | 6.45              | 28.25            | 40.71                              | 23  |
| 126               | 469                          | 0.33                                     | 0.25       | ...     | 17.93  | 2.74                     | 6.69                  | 0.33      | 10.46             | 38.94            | 55.13                              | 24  |
| 51                | 165                          | ...                                      | 0.94       | ...     | 19.43  | 0.70                     | 5.62                  | ...       | 11.94             | 38.62            | 47.10                              | 25  |
| 48                | 207                          | ...                                      | 1.03       | ...     | 11.53  | 3.22                     | 4.87                  | 0.28      | 6.17              | 26.63            | 40.13                              | 26  |
| 45                | 169                          | ...                                      | 1.30       | ...     | 8.51   | 2.83                     | 3.60                  | 0.14      | 6.49              | 22.93            | 40.23                              | 27  |
| 138               | 538                          | ...                                      | 0.48       | ...     | 16.32  | 3.22                     | 0.95                  | 0.16      | 7.29              | 28.41            | 26.62                              | 28  |
| 14                | 71                           | ...                                      | 1.10       | ...     | 7.73   | 1.93                     | 4.42                  | 0.55      | 3.87              | 19.41            | 31.77                              | 29  |
| 10                | 50                           | ...                                      | ...        | ...     | 10.33  | ...                      | 5.16                  | 0.40      | 3.97              | 19.83            | 26.37                              | 30  |
| 121               | 481                          | 0.12                                     | 2.41       | 0.12    | 10.96  | 0.53                     | 6.71                  | 0.41      | 7.11              | 28.33            | 41.11                              | 31  |
| 81                | 69                           | ...                                      | 1.98       | ...     | 10.31  | ...                      | 2.77                  | ...       | 12.29             | 27.85            | 39.48                              | 32  |
| 17                | 124                          | ...                                      | 4.08       | ...     | 13.15  | ...                      | 2.41                  | 0.19      | 3.15              | 22.93            | 36.33                              | 33  |
| 19                | 103                          | ...                                      | 6.79       | ...     | 15.52  | 0.33                     | 4.53                  | ...       | 6.14              | 32.30            | 32.85                              | 34  |
| 35                | 161                          | ...                                      | 4.73       | ...     | 24.46  | ...                      | 6.12                  | 0.55      | 9.73              | 45.59            | 65.50                              | 35  |
| 22                | 244                          | ...                                      | 5.13       | ...     | 21.09  | ...                      | 5.13                  | 0.29      | 3.14              | 34.78            | 38.37                              | 36  |
| 15                | 128                          | ...                                      | 0.21       | ...     | 19.71  | ...                      | 3.08                  | 0.21      | 3.08              | 26.28            | 31.99                              | 37  |
| 29                | 112                          | ...                                      | 5.36       | 0.49    | 24.84  | 0.49                     | 8.28                  | 0.97      | 14.13             | 54.55            | 59.72                              | 38  |
| 18                | 126                          | 0.24                                     | 8.38       | ...     | 14.36  | ...                      | 1.08                  | 1.20      | 4.31              | 30.16            | 31.93                              | 39  |
| 11                | 99                           | ...                                      | 5.20       | ...     | 14.11  | ...                      | 2.23                  | 0.25      | 2.72              | 21.50            | 24.25                              | 40  |
| 288               | 1,544                        | 0.83                                     | 0.78       | 0.02    | 11.78  | 2.62                     | 6.77                  | 0.49      | 5.20              | 27.89            | 40.85                              | 41  |
| 48                | 246                          | 0.46                                     | 3.59       | ...     | 12.74  | 0.93                     | 4.63                  | 0.58      | 5.56              | 28.50            | 46.03                              | 42  |
| 34                | 129                          | 0.22                                     | 0.67       | ...     | 13.26  | 2.82                     | 3.04                  | 0.43      | 7.39              | 28.03            | 35.72                              | 43  |
| 25                | 187                          | ...                                      | 0.32       | ...     | 23.20  | 0.80                     | 1.11                  | 0.32      | 3.97              | 29.72            | 40.12                              | 44  |
| 36                | 213                          | 0.66                                     | 7.66       | ...     | 18.57  | 2.49                     | 4.21                  | 0.19      | 6.70              | 40.77            | 44.93                              | 45  |
| 22                | 263                          | ...                                      | 0.84       | ...     | 15.05  | 1.53                     | 6.97                  | 0.84      | 3.06              | 28.28            | 44.52                              | 46  |
| 49                | 216                          | ...                                      | 2.71       | ...     | 11.06  | 0.90                     | 3.84                  | 0.34      | 5.53              | 21.38            | 45.17                              | 47  |



# ANNUAL FORM

## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

| 1                    | 2                        | 3                                       | 4        | 5          | 6       | 7      | 8                        | 9                     | 10        |          |                       |                                       |         |        |
|----------------------|--------------------------|---|----------|------------|---------|--------|--------------------------|-----------------------|-----------|----------|-----------------------|---------------------------------------|---------|--------|
| No.                  | B.—Towns.                | Population according to Census of 1911. | Cholera. | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | Injuries. |          |                       |                                       |         |        |
|                      |                          |   |          |            |         |        |                          |                       | Suicide.  |          | Wounds and accidents. | Snake-bite and killed by wild beasts. | Rabies. | Total. |
|                      |                          |   |          |            |         |        |                          |                       | Males.    | Females. |                       |                                       |         |        |
| 1                    | 2                        | 3                                       | 4        | 5          | 6       | 7      | 8                        | 9                     | 10        | 11       | 12                    | 13                                    | 14      | 15     |
| LUDHIANA DISTRICT.   |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 48                   | Ludhiana ...             | 43,182                                  | 3        | 100        | ...     | 708    | 103                      | 194                   | ...       | ...      | 12                    | ...                                   | ...     | 12     |
| 49                   | Jagraon ...              | 15,719                                  | ...      | 34         | 1       | 146    | 19                       | 93                    | ...       | ...      | 4                     | ...                                   | 3       | 7      |
| 50                   | Rackot ...               | 7,510                                   | ...      | ...        | ...     | 84     | 5                        | 12                    | ...       | ...      | 5                     | ...                                   | ...     | 5      |
| 51                   | Khanna ...               | 3,319                                   | ...      | 14         | ...     | 35     | 1                        | 9                     | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| FEROZEPUR DISTRICT.  |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 52                   | Ferozepore ...           | 24,678                                  | 10       | 20         | ...     | 291    | 37                       | 121                   | ...       | ...      | 6                     | ...                                   | ...     | 6      |
| 53                   | Zira ...                 | 4,378                                   | ...      | 10         | 1       | 42     | 4                        | 7                     | ...       | ...      | 5                     | 1                                     | 1       | 7      |
| 54                   | Dharmkot ...             | 5,859                                   | ...      | 5          | ...     | 47     | 6                        | 14                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 55                   | Muktesar ...             | 8,834                                   | ...      | 61         | 18      | 62     | 11                       | 11                    | 1         | ...      | ...                   | 1                                     | ...     | 2      |
| 56                   | Patilka ...              | 11,905                                  | 68       | 32         | 16      | 212    | 14                       | 84                    | ...       | ...      | 7                     | ...                                   | ...     | 7      |
| 57                   | Moga ...                 | 9,113                                   | ...      | 17         | ...     | 71     | 2                        | 8                     | ...       | 1        | ...                   | 1                                     | ...     | 2      |
| LAHORE DISTRICT.     |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 58                   | Lahore ...               | 210,271                                 | 101      | 80         | 7       | 3,713  | 311                      | 1,274                 | 3         | ...      | 139                   | 4                                     | 2       | 148    |
| 59                   | Chunian ...              | 7,151                                   | 19       | 18         | 6       | 119    | 9                        | 18                    | ...       | ...      | 4                     | ...                                   | ...     | 4      |
| 60                   | Khudian ...              | 2,992                                   | ...      | 10         | 60      | 40     | 3                        | 8                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 61                   | Kasur ...                | 24,783                                  | 6        | 82         | 1       | 377    | 32                       | 65                    | ...       | ...      | 14                    | ...                                   | 1       | 16     |
| 62                   | Khem Karn ...            | 5,732                                   | 2        | 1          | ...     | 43     | 3                        | 21                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 63                   | Patti ...                | 7,987                                   | 4        | 35         | ...     | 109    | 8                        | 30                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 64                   | Baghbanpura Bhogiwal ... | 6,993                                   | 22       | 8          | ...     | 101    | 4                        | 13                    | ...       | ...      | 2                     | 1                                     | 1       | 4      |
| 65                   | Ichhra ...               | 5,489                                   | ...      | 1          | ...     | 32     | 1                        | 7                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 66                   | Pattoki Mandi ...        | 1,880                                   | 6        | 14         | 45      | 45     | 6                        | 2                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| AMRITSAR DISTRICT.   |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 67                   | Amritsar ...             | 151,349                                 | 88       | 95         | 2       | 2,250  | 139                      | 1,973                 | 3         | ...      | 274                   | 1                                     | 1       | 279    |
| 68                   | Majitha ...              | 5,223                                   | 2        | 18         | ...     | 52     | 9                        | 20                    | ...       | ...      | 2                     | 1                                     | ...     | 3      |
| 69                   | Jandiala ...             | 6,959                                   | ...      | 30         | ...     | 97     | 6                        | 8                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 70                   | Tarn Taran ...           | 4,260                                   | 35       | 8          | ...     | 60     | 9                        | 10                    | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| GURDASPUR DISTRICT.  |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 71                   | Gurdaspur ...            | 5,132                                   | 3        | 18         | ...     | 70     | 11                       | 19                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 72                   | Dinanagar ...            | 4,154                                   | 1        | 4          | ...     | 53     | 8                        | 23                    | ...       | ...      | ...                   | 1                                     | ...     | 1      |
| 73                   | Pathankot ...            | 7,007                                   | 7        | 27         | ...     | 99     | 10                       | 63                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 74                   | Dalhousie ...            | 9,8                                     | ...      | ...        | ...     | 8      | 1                        | 10                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 75                   | Batala ...               | 26,430                                  | 33       | 71         | ...     | 338    | 82                       | 151                   | ...       | ...      | 13                    | ...                                   | 1       | 14     |
| 76                   | Dera Nanak ...           | 4,559                                   | ...      | 2          | ...     | 55     | 5                        | 26                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| SIALKOT DISTRICT.    |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 77                   | Sialkot ...              | 48,595                                  | 45       | 41         | 1       | 575    | 99                       | 432                   | ...       | ...      | 19                    | 1                                     | 1       | 21     |
| 78                   | Daska ...                | 6,046                                   | ...      | 14         | ...     | 80     | 9                        | 16                    | ...       | ...      | 2                     | ...                                   | 1       | 3      |
| 79                   | Jamke ...                | 3,512                                   | ...      | 6          | ...     | 57     | 5                        | 18                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 80                   | Pasrur ...               | 7,564                                   | 3        | 5          | ...     | 83     | 11                       | 54                    | ...       | ...      | ...                   | ...                                   | 1       | 1      |
| 81                   | Zaffarwal ...            | 3,633                                   | 1        | 3          | ...     | 19     | 2                        | 28                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 82                   | Narowal ...              | 4,464                                   | ...      | 14         | ...     | 62     | 5                        | 37                    | ...       | ...      | ...                   | ...                                   | 2       | 2      |
| 83                   | Sambrial ...             | 6,285                                   | ...      | 1          | ...     | 60     | 5                        | 19                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 84                   | Sahowala ...             | 3,578                                   | 1        | 4          | 37      | 57     | 2                        | 3                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 85                   | Begowala ...             | 3,768                                   | ...      | 10         | ...     | 76     | ...                      | 8                     | ...       | ...      | 2                     | 1                                     | ...     | 3      |
| 86                   | Bhopalwala ...           | 3,336                                   | ...      | ...        | ...     | 19     | 3                        | 6                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 87                   | Mitranwali ...           | 2,183                                   | ...      | 8          | ...     | 24     | 10                       | 39                    | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 88                   | Badomali ...             | 2,815                                   | ...      | ...        | ...     | 13     | 6                        | 3                     | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 89                   | Kalaswala ...            | 2,915                                   | ...      | 4          | ...     | 26     | 6                        | 29                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 90                   | Daud ...                 | 3,481                                   | ...      | 8          | ...     | 61     | ...                      | 9                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 91                   | Chawinda ...             | 4,695                                   | ...      | 7          | 1       | 31     | 5                        | 30                    | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| GUJRANWALA DISTRICT. |                          |   |          |            |         |        |                          |                       |           |          |                       |                                       |         |        |
| 92                   | Gujranwala ...           | 28,637                                  | 4        | 160        | 143     | 690    | 22                       | 152                   | ...       | ...      | 25                    | ...                                   | ...     | 25     |
| 93                   | Wazirabad ...            | 17,146                                  | 15       | 3          | ...     | 341    | 11                       | 54                    | ...       | ...      | 1                     | ...                                   | 1       | 2      |
| 94                   | Eminabad ...             | 5,508                                   | ...      | 19         | 30      | 62     | 2                        | 15                    | ...       | 1        | 3                     | ...                                   | ...     | 4      |
| 95                   | Kila Didar Singh ...     | 2,310                                   | ...      | 1          | ...     | 40     | ...                      | 11                    | ...       | ...      | ...                   | ...                                   | 1       | 1      |
| 96                   | Akalgarh ...             | 3,943                                   | 7        | 7          | ...     | 24     | ...                      | 14                    | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 97                   | Ram Nagar ...            | 5,256                                   | ...      | 29         | ...     | 97     | 3                        | 8                     | ...       | ...      | 2                     | ...                                   | ...     | 2      |
| 98                   | Sodra ...                | 4,666                                   | 3        | 8          | ...     | 112    | 5                        | 11                    | ...       | ...      | 3                     | ...                                   | ...     | 3      |
| 99                   | H-firahad ...            | 5,742                                   | ...      | 15         | ...     | 109    | 14                       | 28                    | 1         | ...      | 2                     | ...                                   | ...     | 3      |
| 100                  | Khaigah Dogran ...       | 1,267                                   | 3        | 5          | ...     | 26     | 1                        | 2                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 101                  | Pindi Bhattian ...       | 3,631                                   | ...      | 4          | ...     | 47     | 3                        | 10                    | ...       | ...      | ...                   | 1                                     | ...     | 1      |
| 102                  | Sangla ...               | 980                                     | 45       | 4          | ...     | 20     | ...                      | 2                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 103                  | Sharapur ...             | 4,482                                   | ...      | 5          | ...     | 58     | 3                        | 7                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 104                  | Shahkot ...              | 1,554                                   | 14       | 2          | 13      | 19     | 2                        | 1                     | ...       | ...      | 1                     | ...                                   | ...     | 1      |
| 105                  | Chubar Kana Mandi ...    | 854                                     | 14       | 2          | ...     | 32     | ...                      | 5                     | ...       | ...      | ...                   | ...                                   | ...     | ...    |
| 106                  | Nankana Sahib ...        | 6,131                                   | 20       | 16         | 2       | 65     | 1                        | 7                     | ...       | ...      | 3                     | 1                                     | ...     | 4      |



## No. VI—CONTINUED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1919—CONTINUED.

| 11                | 12                            | 13                                       |            |         |        |                          |                       |           |                   |                  |                                    | 14  |
|-------------------|-------------------------------|--|------------|---------|--------|--------------------------|-----------------------|-----------|-------------------|------------------|------------------------------------|-----|
| All other causes. | Total deaths from all causes. | RATIO OF DEATHS PER 1,000 OF POPULATION. |            |         |        |                          |                       |           |                   |                  |                                    | No. |
|                   |                               | Cholera.                                 | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | Injuries. | All other causes. | From all causes. |                                    |     |
|                   |                               |  |            |         |        |                          |                       |           |                   | For the year.    | Mean ratio of previous five years. |     |
| 16                | 17                            | 18                                       | 19         | 20      | 21     | 22                       | 23                    | 24        | 25                | 26               | 27                                 | 28  |
| 412               | 1,529                         | 0.07                                     | 2.32       | ...     | 16.24  | 2.39                     | 4.49                  | 0.28      | 9.55              | 35.43            | 45.68                              | 48  |
| 188               | 493                           | ...                                      | 2.26       | 0.07    | 9.71   | 1.26                     | 6.52                  | 0.47      | 12.50             | 32.78            | 53.77                              | 49  |
| 63                | 169                           | ...                                      | ...        | ...     | 11.19  | 0.67                     | 1.60                  | 0.67      | 8.39              | 22.50            | 48.23                              | 50  |
| 26                | 87                            | ...                                      | 4.22       | ...     | 10.55  | 0.30                     | 2.71                  | 0.60      | 7.83              | 26.21            | 49.22                              | 51  |
| 179               | 664                           | 0.41                                     | 0.81       | ...     | 11.79  | 1.50                     | 4.90                  | 0.24      | 7.25              | 26.91            | 37.63                              | 52  |
| 41                | 112                           | ...                                      | 2.28       | 0.23    | 9.53   | 0.02                     | 1.60                  | 1.60      | 9.37              | 25.68            | 43.86                              | 53  |
| 91                | 163                           | ...                                      | 0.85       | ...     | 8.02   | 1.03                     | 2.39                  | ...       | 15.53             | 27.82            | 37.62                              | 54  |
| 66                | 221                           | ...                                      | 6.91       | 2.04    | 7.02   | 1.25                     | 1.25                  | 0.23      | 7.47              | 29.15            | 43.22                              | 55  |
| 123               | 556                           | 6.19                                     | 1.91       | 1.46    | 19.30  | 1.28                     | 7.65                  | 0.64      | 11.20             | 50.61            | 58.50                              | 56  |
| 39                | 139                           | ...                                      | 1.86       | ...     | 7.79   | 0.22                     | 0.38                  | 0.22      | 4.28              | 15.25            | Not available.                     | 57  |
| 1,522             | 7,156                         | 0.48                                     | 0.38       | 0.03    | 17.66  | 1.48                     | 6.06                  | 0.70      | 7.24              | 34.03            | 42.01                              | 58  |
| 86                | 289                           | 4.06                                     | 2.52       | 0.84    | 16.64  | 1.26                     | 2.52                  | 0.58      | 12.03             | 40.41            | 57.36                              | 59  |
| 18                | 140                           | ...                                      | 3.34       | 20.05   | 13.37  | 1.00                     | 2.67                  | 0.33      | 6.02              | 45.79            | 45.79                              | 60  |
| 264               | 842                           | 0.24                                     | 3.31       | 0.04    | 15.21  | 1.29                     | 2.62                  | 0.61      | 10.65             | 33.97            | 44.25                              | 61  |
| 81                | 151                           | 0.35                                     | 0.17       | ...     | 7.50   | 0.52                     | 3.66                  | ...       | 14.13             | 26.34            | 40.93                              | 62  |
| 74                | 261                           | 0.50                                     | 4.38       | ...     | 13.65  | 1.09                     | 3.76                  | 0.13      | 9.27              | 32.68            | 42.82                              | 63  |
| 45                | 238                           | 3.15                                     | 1.14       | ...     | 23.03  | 0.57                     | 1.85                  | 0.57      | 6.58              | 36.89            | Not available.                     | 64  |
| 7                 | 48                            | ...                                      | 0.18       | ...     | 5.83   | 0.18                     | 1.28                  | ...       | 1.28              | 8.74             | Not available.                     | 65  |
| 21                | 139                           | 3.19                                     | 7.45       | 23.94   | 23.94  | 3.19                     | 1.06                  | ...       | 11.17             | 73.94            | Not available.                     | 66  |
| 661               | 5,482                         | 0.55                                     | 0.63       | 0.01    | 14.87  | 0.92                     | 13.04                 | 1.84      | 4.37              | 36.22            | 53.47                              | 67  |
| 55                | 159                           | 0.38                                     | 3.45       | ...     | 9.96   | 1.72                     | 3.83                  | 0.57      | 10.53             | 30.44            | 44.88                              | 68  |
| 33                | 175                           | ...                                      | 4.34       | ...     | 13.94  | 0.86                     | 1.15                  | 0.14      | 4.74              | 25.15            | 41.18                              | 69  |
| 20                | 144                           | 8.22                                     | 1.88       | ...     | 14.03  | 2.11                     | 2.35                  | 0.47      | 4.69              | 33.30            | 39.67                              | 70  |
| 27                | 148                           | 0.58                                     | 3.51       | ...     | 13.64  | 2.14                     | 3.70                  | ...       | 5.76              | 28.83            | 42.63                              | 71  |
| 33                | 123                           | 0.24                                     | 0.96       | ...     | 12.76  | 1.93                     | 5.84                  | 0.24      | 7.94              | 29.31            | 56.73                              | 72  |
| 56                | 263                           | 1.00                                     | 3.85       | ...     | 14.13  | 1.43                     | 8.90                  | 0.14      | 7.99              | 37.53            | 53.63                              | 73  |
| 1                 | 20                            | ...                                      | ...        | ...     | 8.53   | 1.07                     | 10.66                 | ...       | 1.07              | 21.32            | 33.05                              | 74  |
| 172               | 811                           | 1.25                                     | 2.69       | ...     | 12.79  | 1.21                     | 5.71                  | 0.53      | 6.51              | 30.08            | 45.49                              | 75  |
| 13                | 101                           | ...                                      | 0.44       | ...     | 12.07  | 1.10                     | 6.71                  | ...       | 2.85              | 22.17            | 35.29                              | 76  |
| 467               | 1,681                         | 0.93                                     | 0.84       | 0.02    | 11.83  | 2.04                     | 8.89                  | 0.43      | 9.61              | 34.59            | 40.35                              | 77  |
| 37                | 159                           | ...                                      | 2.32       | ...     | 13.23  | 1.49                     | 2.45                  | 0.50      | 6.12              | 26.30            | 34.57                              | 78  |
| 32                | 118                           | ...                                      | 1.69       | ...     | 16.19  | 1.41                     | 5.03                  | ...       | 9.03              | 33.31            | 42.69                              | 79  |
| 42                | 199                           | 0.40                                     | 0.68       | ...     | 10.97  | 1.45                     | 7.14                  | 0.13      | 5.55              | 26.31            | 37.86                              | 80  |
| 13                | 66                            | 0.28                                     | 0.83       | ...     | 5.23   | 0.56                     | 7.71                  | ...       | 3.58              | 18.17            | 43.77                              | 81  |
| 34                | 154                           | ...                                      | 3.14       | ...     | 13.69  | 1.12                     | 8.28                  | 0.45      | 7.62              | 31.50            | 44.35                              | 82  |
| 6                 | 92                            | ...                                      | 0.16       | ...     | 9.55   | 0.80                     | 3.02                  | 0.16      | 0.95              | 14.64            | Not available.                     | 83  |
| 11                | 115                           | 0.23                                     | 1.12       | 10.40   | 16.02  | 0.56                     | 0.84                  | ...       | 3.09              | 32.32            | Not available.                     | 84  |
| 14                | 111                           | ...                                      | 2.65       | ...     | 20.17  | ...                      | 2.12                  | 0.80      | 3.72              | 29.46            | Not available.                     | 85  |
| 15                | 53                            | ...                                      | ...        | ...     | 8.69   | 0.90                     | 1.00                  | ...       | 4.50              | 15.89            | Not available.                     | 86  |
| 23                | 104                           | ...                                      | 2.51       | ...     | 7.54   | 3.14                     | 12.21                 | ...       | 7.23              | 32.67            | Not available.                     | 87  |
| 12                | 36                            | ...                                      | ...        | ...     | 4.62   | 2.13                     | 1.05                  | 0.72      | 4.26              | 12.79            | Not available.                     | 88  |
| 11                | 77                            | ...                                      | 1.37       | ...     | 8.92   | 2.06                     | 9.95                  | 0.34      | 3.77              | 26.42            | Not available.                     | 89  |
| 18                | 97                            | ...                                      | 2.30       | ...     | 17.52  | ...                      | 2.69                  | 0.29      | 5.17              | 27.87            | Not available.                     | 90  |
| 12                | 88                            | ...                                      | 1.49       | 0.21    | 6.60   | 1.06                     | 6.39                  | 0.43      | 2.56              | 18.74            | Not available.                     | 91  |
| 204               | 1,400                         | 0.14                                     | 5.59       | 4.99    | 24.09  | 0.77                     | 5.31                  | 0.87      | 7.12              | 48.89            | 48.08                              | 92  |
| 99                | 525                           | 0.87                                     | 0.17       | ...     | 19.89  | 0.64                     | 3.15                  | 0.12      | 5.77              | 30.62            | 42.91                              | 93  |
| 16                | 150                           | ...                                      | 3.44       | 5.43    | 11.22  | 0.36                     | 2.71                  | 0.72      | 3.26              | 27.14            | 41.69                              | 94  |
| 21                | 74                            | ...                                      | 0.45       | ...     | 18.10  | ...                      | 4.98                  | 0.45      | 9.50              | 33.48            | 54.03                              | 95  |
| 4                 | 19                            | 1.78                                     | 1.78       | ...     | 6.29   | ...                      | 3.55                  | 0.25      | 1.01              | 14.96            | 25.67                              | 96  |
| 33                | 172                           | ...                                      | 5.52       | ...     | 18.46  | 0.57                     | 1.52                  | 0.38      | 6.28              | 32.72            | 47.22                              | 97  |
| 32                | 174                           | 0.64                                     | 1.71       | ...     | 24.00  | 1.07                     | 2.36                  | 0.64      | 6.86              | 37.29            | 53.02                              | 98  |
| 34                | 203                           | ...                                      | 2.61       | ...     | 18.98  | 2.44                     | 4.88                  | 0.52      | 5.92              | 35.35            | 40.44                              | 99  |
| 8                 | 45                            | 2.37                                     | 3.95       | ...     | 20.52  | 0.79                     | 1.58                  | ...       | 6.31              | 35.52            | 32.68                              | 100 |
| 25                | 90                            | ...                                      | 1.10       | ...     | 12.94  | 0.83                     | 2.75                  | 0.29      | 6.88              | 24.79            | 38.28                              | 101 |
| ...               | 71                            | 45.91                                    | 4.08       | ...     | 20.41  | ...                      | 2.04                  | ...       | ...               | 72.45            | 32.24                              | 102 |
| 23                | 97                            | ...                                      | 1.12       | ...     | 12.94  | 0.87                     | 1.56                  | 0.22      | 5.13              | 21.64            | 47.70                              | 103 |
| 4                 | 56                            | 13.28                                    | 1.90       | 12.33   | 18.04  | 1.90                     | 0.95                  | 0.95      | 3.80              | 59.18            | 40.04                              | 104 |
| 8                 | 61                            | 16.39                                    | 2.34       | ...     | 37.47  | ...                      | 5.85                  | ...       | 9.37              | 71.48            | Not available.                     | 105 |
| 10                | 125                           | 3.28                                     | 2.61       | 0.33    | 10.60  | 0.16                     | 1.14                  | 0.60      | 1.63              | 20.39            | Not available.                     | 106 |



ANNUAL FORM  
DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

| 1                         | 2                   | 3                                       | 4        | 5          | 6       | 7       | 8                        | 9                     | 10        |          |                       |  |         |        |
|---------------------------|---------------------|---|----------|------------|---------|---------|--------------------------|-----------------------|-----------|----------|-----------------------|--|---------|--------|
| No.                       | B. Towns.           | Population according to Census of 1911. | Cholera. | Small-pox. | Plague. | Fever.  | Dysentery and Diarrhoea. | Respiratory diseases. | INJURIES. |          |                       |  |         |        |
|                           |                     |   |          |            |         |         |                          |                       | Suicide.  |          | Wounds and accidents. | Snake-bites and killed by wild beasts. | Rabies. | Total. |
| 1                         | 2                   | 3                                       | 4        | 5          | 6       | 7       | 8                        | 9                     | Males.    | Females. | 12                    | 13                                     | 14      | 15     |
| GUJRAT DISTRICT.          |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 107                       | Gujrat ...          | 18,692                                  | 45       | 17         | 2       | 403     | 25                       | 121                   | ...       | ...      | 11                    | 1                                      | ...     | 12     |
| 108                       | Jalalpur ...        | 11,615                                  | 16       | 5          | 1       | 232     | 20                       | 75                    | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 109                       | Kunjah ...          | 7,090                                   | 7        | 7          | ...     | 157     | 9                        | 12                    | ...       | ...      | 1                     | ...                                    | ...     | 1      |
| 110                       | Dinga ...           | 5,351                                   | 2        | 26         | ...     | 61      | 3                        | 31                    | ...       | ...      | 1                     | ...                                    | ...     | 1      |
| SHAHNUR DISTRICT.         |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 111                       | Shahpur ...         | 8,739                                   | ...      | 1          | ...     | 41      | 11                       | 51                    | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 112                       | Chakral ...         | 7,658                                   | ...      | 25         | ...     | 95      | 2                        | 21                    | ...       | ...      | 5                     | ...                                    | ...     | 5      |
| 113                       | Bhora ...           | 15,202                                  | ...      | 15         | 1       | 238     | 47                       | 47                    | ...       | ...      | 12                    | ...                                    | ...     | 12     |
| 114                       | Miani ...           | 5,819                                   | ...      | 12         | 1       | 92      | 10                       | 11                    | ...       | ...      | 6                     | ...                                    | ...     | 6      |
| 115                       | Khanhab ...         | 10,169                                  | ...      | 5          | ...     | 112     | 27                       | 54                    | ...       | ...      | 1                     | ...                                    | 1       | 2      |
| 116                       | Sargodha ...        | 8,949                                   | ...      | 7          | ...     | 74      | 11                       | 22                    | ...       | ...      | 5                     | 1                                      | ...     | 6      |
| JHELUM DISTRICT.          |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 117                       | Jhelum ...          | 12,293                                  | 6        | 14         | 164     | 257     | 14                       | 84                    | 1         | ...      | 6                     | ...                                    | ...     | 7      |
| 118                       | Phad Dadan Khan ... | 10,590                                  | ...      | 10         | ...     | 209     | 16                       | 29                    | ...       | ...      | ...                   | 1                                      | ...     | 1      |
| RAWALPINDI DISTRICT.      |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 119                       | Rawalpindi ...      | 45,642                                  | 133      | 61         | 297     | 876     | 122                      | 321                   | 1         | 1        | 22                    | ...                                    | ...     | 24     |
| 120                       | Murree ...          | 1,391                                   | 1        | ...        | ...     | 14      | 2                        | 8                     | ...       | ...      | 1                     | ...                                    | ...     | 1      |
| ATTOCK DISTRICT.          |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 121                       | Findigheb ...       | 9,045                                   | 19       | ...        | 1       | 131     | ...                      | 21                    | ...       | ...      | 3                     | ...                                    | ...     | 3      |
| 122                       | Hazro ...           | 9,950                                   | 11       | 19         | 82      | 130     | 10                       | 41                    | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| MIANWALI DISTRICT.        |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 123                       | Mianwali ...        | 6,224                                   | ...      | ...        | ...     | 111     | 10                       | 7                     | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 124                       | Bhakkar ...         | 5,388                                   | ...      | 3          | ...     | 160     | 2                        | 4                     | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 125                       | Isa Khel ...        | 6,863                                   | 2        | ...        | ...     | 125     | 9                        | 4                     | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 126                       | Kalabagh ...        | 6,654                                   | 11       | ...        | ...     | 185     | 28                       | 11                    | ...       | ...      | 4                     | ...                                    | ...     | 4      |
| MONTGOMERY DISTRICT.      |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 127                       | Montgomery ...      | 8,129                                   | 4        | 19         | 1       | 99      | 3                        | 27                    | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| 128                       | Kamalia ...         | 8,237                                   | ...      | 33         | ...     | 145     | 8                        | 8                     | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| 129                       | Pakpattan ...       | 7,912                                   | ...      | 33         | ...     | 173     | ...                      | 1                     | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| LYALLPUR DISTRICT.        |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 130                       | Lyallpur ...        | 19,378                                  | 6        | 52         | 30      | 203     | 30                       | 77                    | ...       | ...      | 8                     | ...                                    | ...     | 8      |
| 131                       | Gojra ...           | 5,417                                   | 3        | 8          | 50      | 51      | 4                        | 23                    | ...       | ...      | 5                     | ...                                    | ...     | 5      |
| JHANG DISTRICT.           |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 132                       | Jhang-Maghiana ...  | 25,914                                  | 4        | 6          | 7       | 411     | 107                      | 48                    | ...       | ...      | 4                     | ...                                    | 1       | 5      |
| 133                       | Chiniot ...         | 14,085                                  | 33       | 117        | ...     | 168     | 23                       | 29                    | ...       | ...      | 15                    | 1                                      | ...     | 16     |
| MULTAN DISTRICT.          |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 134                       | Multan ...          | 55,747                                  | ...      | 35         | 236     | 1,274   | 208                      | 561                   | ...       | ...      | 12                    | 4                                      | ...     | 16     |
| 135                       | Shujabad ...        | 6,334                                   | ...      | 17         | 3       | 140     | 16                       | 29                    | ...       | ...      | 2                     | 2                                      | ...     | 4      |
| MUZAFFARGARH DISTRICT.    |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 136                       | Muzaffargarh ...    | 4,119                                   | ...      | 2          | 1       | 75      | 4                        | 23                    | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 137                       | Khangarh ...        | 3,349                                   | ...      | ...        | ...     | 56      | 8                        | 12                    | ...       | ...      | ...                   | 1                                      | ...     | 1      |
| 138                       | Alipur ...          | 3,312                                   | ...      | ...        | ...     | 66      | 17                       | 14                    | ...       | ...      | 2                     | ...                                    | ...     | 2      |
| 139                       | Leiah ...           | 8,173                                   | ...      | 3          | ...     | 300     | 10                       | 7                     | ...       | ...      | 1                     | ...                                    | ...     | 1      |
| 140                       | Karor ...           | 3,603                                   | ...      | 2          | ...     | 86      | 16                       | 12                    | ...       | ...      | 1                     | ...                                    | ...     | 1      |
| DERA GHAZI KHAN DISTRICT. |                     |   |          |            |         |         |                          |                       |           |          |                       |  |         |        |
| 141                       | Dera Ghazi Khan ... | 16,853                                  | 7        | 5          | 1       | 219     | 25                       | 11                    | ...       | ...      | 2                     | 1                                      | ...     | 3      |
| 142                       | Jampur ...          | 6,517                                   | ...      | ...        | ...     | 112     | 3                        | 3                     | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| 143                       | Dajal ...           | 6,893                                   | ...      | 1          | ...     | 110     | 4                        | 12                    | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| 144                       | Rajampur ...        | 3,704                                   | ...      | ...        | ...     | 125     | ...                      | 7                     | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| 145                       | Kot Mithan ...      | 2,509                                   | ...      | ...        | ...     | 57      | 2                        | 3                     | ...       | ...      | ...                   | ...                                    | ...     | ...    |
| Total                     |                     | 1,777,214                               | 1,120    | 2,862      | 1,448   | 27,540  | 2,932                    | 9,456                 | 17        | 6        | 896                   | 35                                     | 25      | 919    |
| Total for the Province    |                     | 9,337,146                               | 8,561    | 15,365     | 11,068  | 365,045 | 8,239                    | 37,813                | 116       | 145      | 5,691                 | 802                                    | 142     | 2,896  |



## VI—CONCLUDED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1919—CONCLUDED.

| 11                | 12                            | 13                                       |            |         |        |                          |                       |           |                   |                  |                                    | 14  |
|-------------------|-------------------------------|--|------------|---------|--------|--------------------------|-----------------------|-----------|-------------------|------------------|------------------------------------|-----|
| All other causes. | Total deaths from all causes. | RATIO OF DEATHS PER 1,000 OF POPULATION. |            |         |        |                          |                       |           |                   |                  |                                    | No. |
|                   |                               | Cholera.                                 | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | Injuries. | All other causes. | From all causes. |                                    |     |
|                   |                               |  |            |         |        |                          |                       |           |                   | For the year.    | Mean ratio of previous five years. |     |
| 16                | 17                            | 18                                       | 19         | 20      | 21     | 22                       | 23                    | 24        | 25                | 26               | 27                                 | 28  |
| 172               | 797                           | 2.41                                     | 0.91       | 0.11    | 21.56  | 1.34                     | 6.47                  | 0.64      | 9.20              | 42.34            | 42.87                              | 107 |
| 76                | 427                           | 1.38                                     | 0.43       | 0.09    | 19.97  | 1.72                     | 6.46                  | 0.17      | 6.54              | 39.76            | 33.75                              | 108 |
| 25                | 218                           | 0.99                                     | 0.99       | ...     | 22.14  | 1.27                     | 1.09                  | 0.14      | 3.53              | 3.75             | 40.61                              | 109 |
| 30                | 183                           | 0.37                                     | 4.67       | ...     | 11.40  | 0.56                     | 5.19                  | 0.19      | 5.61              | 28.19            | 35.77                              | 110 |
| 30                | 136                           | ...                                      | 0.11       | ...     | 4.69   | 1.26                     | 5.84                  | 0.23      | 3.43              | 15.56            | 20.42                              | 111 |
| 73                | 223                           | ...                                      | 3.26       | ...     | 12.64  | 0.26                     | 2.74                  | 0.65      | 9.53              | 23.99            | 42.88                              | 112 |
| 194               | 554                           | ...                                      | 0.99       | 0.07    | 15.66  | 3.19                     | 3.09                  | 0.79      | 12.76             | 36.44            | 43.24                              | 113 |
| 41                | 176                           | ...                                      | 2.06       | 0.17    | 16.81  | 1.72                     | 1.89                  | 1.03      | 7.56              | 30.25            | 48.60                              | 114 |
| 100               | 300                           | ...                                      | 0.49       | ...     | 11.02  | 2.66                     | 5.32                  | 0.20      | 9.84              | 19.53            | 43.93                              | 115 |
| 75                | 175                           | ...                                      | 0.19       | ...     | 6.10   | 1.24                     | 2.19                  | 0.68      | 8.48              | 19.78            | 15.37                              | 116 |
| 102               | 648                           | 0.49                                     | 1.14       | 13.34   | 20.90  | 1.14                     | 6.83                  | 0.57      | 8.29              | 52.69            | 37.03                              | 117 |
| 51                | 319                           | ...                                      | 0.94       | ...     | 19.74  | 1.51                     | 2.74                  | 0.09      | 5.10              | 30.12            | 52.65                              | 118 |
| 469               | 2,306                         | 2.92                                     | 1.31       | 6.37    | 18.78  | 2.62                     | 6.88                  | 0.51      | 10.06             | 49.44            | 43.27                              | 119 |
| 7                 | 33                            | 0.73                                     | ...        | ...     | 10.29  | 1.47                     | 5.88                  | 0.73      | 5.14              | 24.25            | 32.48                              | 120 |
| 25                | 210                           | 2.10                                     | ...        | 0.11    | 14.48  | ...                      | 2.32                  | 0.33      | 3.87              | 23.22            | 34.49                              | 121 |
| 78                | 371                           | 1.11                                     | 1.91       | 8.24    | 18.07  | 1.01                     | 4.12                  | ...       | 7.84              | 37.29            | 29.54                              | 122 |
| 15                | 145                           | ...                                      | ...        | ...     | 17.83  | 1.61                     | 1.12                  | 0.32      | 2.41              | 23.30            | 33.19                              | 123 |
| 7                 | 228                           | ...                                      | 0.56       | ...     | 29.69  | 0.87                     | 0.74                  | 0.37      | 10.58             | 42.32            | 51.11                              | 124 |
| 6                 | 148                           | 0.29                                     | ...        | ...     | 18.20  | 1.31                     | 0.58                  | 0.29      | 0.87              | 21.55            | 37.97                              | 125 |
| 26                | 265                           | 1.65                                     | ...        | ...     | 27.80  | 4.21                     | 1.65                  | 0.60      | 3.91              | 39.83            | 37.93                              | 126 |
| 52                | 205                           | 0.49                                     | 2.34       | 0.12    | 12.18  | 0.37                     | 3.32                  | ...       | 6.40              | 25.22            | 26.94                              | 127 |
| 75                | 269                           | ...                                      | 4.01       | ...     | 17.60  | 0.97                     | 0.97                  | ...       | 9.10              | 32.66            | 49.17                              | 128 |
| 22                | 229                           | ...                                      | 4.16       | ...     | 21.87  | ...                      | 0.13                  | ...       | 2.77              | 28.94            | 45.15                              | 129 |
| 71                | 477                           | 0.31                                     | 2.66       | 1.53    | 10.37  | 1.53                     | 3.93                  | 0.41      | 3.63              | 24.36            | 19.58                              | 130 |
| 54                | 198                           | 0.55                                     | 1.48       | 9.22    | 9.41   | 0.74                     | 4.35                  | 0.92      | 9.97              | 36.65            | 7.97                               | 131 |
| 220               | 803                           | 0.15                                     | 0.23       | 0.27    | 15.69  | 4.18                     | 1.89                  | 0.12      | 8.49              | 31.18            | 43.54                              | 132 |
| 241               | 627                           | 2.34                                     | 8.31       | ...     | 11.93  | 1.63                     | 2.06                  | 1.14      | 17.11             | 44.52            | 46.70                              | 133 |
| 699               | 8,059                         | ...                                      | 0.41       | 3.10    | 14.86  | 2.43                     | 6.54                  | 0.19      | 8.15              | 35.67            | 46.39                              | 134 |
| 78                | 287                           | ...                                      | 2.68       | 0.47    | 22.10  | 2.53                     | 4.58                  | 0.63      | 12.31             | 45.31            | 47.65                              | 135 |
| 9                 | 116                           | ...                                      | 0.49       | 0.24    | 18.21  | 0.97                     | 5.58                  | 0.49      | 2.18              | 28.16            | 38.46                              | 136 |
| 47                | 124                           | ...                                      | ...        | ...     | 16.73  | 2.39                     | 3.58                  | 0.30      | 14.04             | 37.03            | 57.45                              | 137 |
| 46                | 135                           | ...                                      | ...        | ...     | 16.91  | 5.13                     | 4.23                  | 0.60      | 13.89             | 40.76            | 48.07                              | 138 |
| 49                | 270                           | ...                                      | 0.37       | ...     | 24.47  | 1.21                     | 0.86                  | 0.12      | 6.00              | 33.04            | 39.06                              | 139 |
| 45                | 162                           | ...                                      | 0.57       | ...     | 24.55  | 4.57                     | 3.43                  | 0.28      | 12.85             | 46.25            | 57.72                              | 140 |
| 123               | 394                           | 0.42                                     | 0.30       | 0.06    | 12.99  | 1.48                     | 0.65                  | 0.18      | 7.30              | 23.38            | 23.24                              | 141 |
| 54                | 172                           | ...                                      | ...        | ...     | 17.19  | 0.46                     | 0.46                  | ...       | 8.29              | 26.89            | 40.08                              | 142 |
| 68                | 195                           | ...                                      | 0.16       | ...     | 15.96  | 0.58                     | 1.74                  | ...       | 9.87              | 28.29            | 50.11                              | 143 |
| 22                | 155                           | ...                                      | ...        | ...     | 34.02  | ...                      | 1.89                  | ...       | 5.94              | 41.85            | 53.56                              | 144 |
| 15                | 77                            | ...                                      | ...        | ...     | 22.02  | 0.77                     | 1.16                  | ...       | 5.79              | 29.74            | 51.53                              | 145 |
| 14,550            | 60,327                        | 0.63                                     | 1.33       | 0.81    | 15.50  | 1.65                     | 5.32                  | 0.52      | 8.19              | 33.95            | 43.79                              |     |
| 94,683            | 548,070                       | 0.44                                     | 0.79       | 0.57    | 18.88  | 0.45                     | 1.96                  | 0.36      | 4.90              | 23.34            | 43.57                              |     |



## APPENDIX TO ANNUAL FORM No. VI-B.

BIRTHS AND DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB  
DURING THE YEAR 1919.

| No.   | CANTONMENTS.    | Population according to the census of 1911. | Cholera. | Small-pox. | Plague. | Fever. | Dysentery and Diarrhoea. | Respiratory diseases. | INJURIES. |          |                       |                                       |        |       | All other causes. | Total deaths from all causes. | Ratio of deaths per 1,000 of population | Total births registered during the year. | Ratio of births per 1,000 of population. | No. |
|-------|-----------------|---|----------|------------|---------|--------|--------------------------|-----------------------|-----------|----------|-----------------------|---------------------------------------|--------|-------|-------------------|-------------------------------|---|--|--|-----|
|       |                 |   |          |            |         |        |                          |                       | Suicide.  |          | Wounds and accidents. | Snake-bite and killed by wild beasts. | Total. |       |                   |                               |   |  |  |     |
|       |                 |   |          |            |         |        |                          |                       | Males.    | Females. |                       |                                       |        |       |                   |                               |   |  |  |     |
|       |                 |   |          |            |         |        |                          |                       |           |          |                       |                                       |        |       |                   |                               |   |  |  |     |
| 1     | 2               | 3   | 4        | 5          | 6       | 7      | 8                        | 9                     | 10        | 11       | 12                    | 13                                    | 14     | 15    | 16                | 17                            | 18                                      | 19                                       | 20                                       |     |
| 1     | Ambala ...      | 54,223                                      | 6        | 1          | ...     | 496    | 34                       | 74                    | ...       | 1        | 4                     | ...                                   | 5      | 404   | 1,020             | 19                            | 1,347                                   | 25                                       | 1  |     |
| 2     | Kasauli ...     | 3,194                                       | ...      | ...        | ...     | 59     | 2                        | ...                   | ...       | ...      | 1                     | 6                                     | 7      | 39    | 107               | 34                            | 90                                      | 28                                       | 2  |     |
| 3     | Dagshai ...     | 2,032                                       | ...      | ...        | ...     | 8      | 1                        | ...                   | ...       | ...      | 1                     | ...                                   | 1      | 29    | 39                | 19                            | 60                                      | 30                                       | 3  |     |
| 4     | Sabathu ...     | 1,847                                       | ...      | ...        | ...     | 22     | ...                      | ...                   | ...       | ...      | ...                   | ...                                   | ...    | 6     | 28                | 15                            | 24                                      | 13                                       | 4  |     |
| 5     | Jatogh ...      | 471   | ...      | ...        | ...     | 2      | ...                      | ...                   | ...       | ...      | ...                   | ...                                   | ...    | 10    | 12                | 25                            | 8                                       | 17                                       | 5  |     |
| 6     | Dharmasala ...  | 3,700                                       | ...      | 1          | ...     | 16     | ...                      | ...                   | ...       | ...      | ...                   | ...                                   | ...    | 7     | 24                | 6                             | 58                                      | 16                                       | 6  |     |
| 7     | Jullundur ...   | 13,964                                      | ...      | 1          | ...     | 87     | 5                        | 36                    | 5         | 1        | 2                     | ...                                   | 8      | 64    | 201               | 14                            | 180                                     | 13                                       | 7  |     |
| 8     | Perozepore ...  | 26,158                                      | ...      | 1          | ...     | 312    | 16                       | 47                    | 1         | ...      | 7                     | 2                                     | 10     | 222   | 608               | 23                            | 849                                     | 32                                       | 8  |     |
| 9     | Lahore ...      | 18,416                                      | 29       | 4          | ...     | 227    | 7                        | 115                   | ...       | ...      | ...                   | ...                                   | ...    | 52    | 434               | 24                            | 291                                     | 16                                       | 9  |     |
| 10    | Amritsar ...    | 1,417                                       | 1        | ...        | ...     | 25     | 3                        | 20                    | ...       | 1        | ...                   | ...                                   | 1      | 24    | 74                | 52                            | 35                                      | 25                                       | 10                                       |     |
| 11    | Dalhousie ...   | 644   | ...      | ...        | ...     | 2      | 1                        | ...                   | ...       | ...      | ...                   | ...                                   | ...    | 11    | 14                | 22                            | 23                                      | 36                                       | 11                                       |     |
| 12    | Bakloh ...      | 3,566                                       | ...      | ...        | ...     | 4      | ...                      | 1                     | ...       | ...      | ...                   | ...                                   | ...    | 4     | 9                 | 2                             | 15                                      | 4  | 12                                       |     |
| 13    | Sialkot ...     | 16,274                                      | 7        | ...        | ...     | 55     | 10                       | 34                    | ...       | ...      | ...                   | ...                                   | ...    | 106   | 212               | 18                            | 270                                     | 17                                       | 13                                       |     |
| 14    | Jhelum ...      | 7,380                                       | ...      | ...        | 6       | 11     | 4                        | 1                     | ...       | ...      | ...                   | ...                                   | ...    | 7     | 29                | 4                             | 27                                      | 4  | 14                                       |     |
| 15    | Rawalpindi ...  | 39,841                                      | 12       | 3          | 15      | 194    | 12                       | 66                    | ...       | ...      | 8                     | 1                                     | 9      | 55    | 366               | 9                             | 427                                     | 11                                       | 15                                       |     |
| 16    | Campbellpur ... | 3,357                                       | ...      | ...        | ...     | 21     | ...                      | ...                   | ...       | ...      | ...                   | ...                                   | ...    | 14    | 35                | 10                            | 49                                      | 15                                       | 16                                       |     |
| 17    | Murree ...      | 344   | ...      | ...        | ...     | 2      | ...                      | ...                   | ...       | ...      | ...                   | ...                                   | ...    | 14    | 16                | 47                            | 16                                      | 29                                       | 17                                       |     |
| 18    | Attock ...      | 630   | ...      | ...        | ...     | ...    | ...                      | ...                   | ...       | ...      | ...                   | ...                                   | ...    | ...   | ...               | ...                           | ...                                     | ...                                      | 18                                       |     |
| 19    | Multan ...      | 13,496                                      | ...      | 2          | ...     | 67     | 3                        | 6                     | ...       | ...      | ...                   | ...                                   | ...    | 34    | 112               | 8                             | 95                                      | 7  | 19                                       |     |
| Total |                 | 310,954                                     | 55       | 12         | 21      | 1,610  | 98                       | 400                   | 6         | 3        | 23                    | 9                                     | 41     | 1,102 | 3,340             | 16                            | 3,858                                   | 18                                       |  |     |



## ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS OF THE PUNJAB  
DURING EACH MONTH OF THE YEAR 1912.

| 1                      | 2               | 3                        | 4  | 5                        |  |          |           |        |        |      |       |       |         |            |          | 6         |           |        | 7        |        |  | 8        | 9      |   |      |    |
|------------------------|-----------------|--------------------------|--|--------------------------|--|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|----------|--------|--|----------|--------|---|------|----|
| No.                    | DISTRICTS.      | CIRCLES OF REGISTRATION. |  | VILLAGES.                |  | MONTHS.  |           |        |        |      |       |       |         |            |          |           |           | TOTAL. |          |        | RATIO OF DEATHS PER 1,000 OF POPULATION. |          |        | Mean ratio per 1,000 for previous five years. | No.  |    |
|                        |                 | Number in each district. | Number from which deaths from cholera were reported. | Number in each district. | Number from which deaths from cholera were reported. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Males. | Females. | Total. | Males.                                   | Females. | Total. |   |      |    |
| 1                      | 2               | 3                        | 4  | 5                        | 6  | 7        | 8         | 9      | 10     | 11   | 12    | 13    | 14      | 15         | 16       | 17        | 18        | 19     | 20       | 21     | 22                                       | 23       | 24     | 25  | 26   |    |
| AMBALA DIVISION.       |                 |                          |  |                          |  |          |           |        |        |      |       |       |         |            |          |           |           |        |          |        |  |          |        |   |      |    |
| 1                      | Hissar          | 37                       | 4  | 953                      | 3  | ...      | ...       | ...    | ...    | ...  | ...   | 19    | 13      | 6          | ...      | ...       | ...       | 17     | 13       | 29     | 0.04                                     | 0.03     | 0.04   | 0.21  | 1    |    |
| 2                      | Rohtak          | 19                       | 3  | 731                      | 5  | ...      | ...       | ...    | ...    | ...  | 33    | 41    | ...     | 3          | ...      | ...       | ...       | 44     | 31       | 75     | 0.11                                     | 0.09     | 0.10   | 0.18  | 2    |    |
| 3                      | Gurgaon         | 24                       | 14   | 1,367                    | 39   | ...      | ...       | ...    | ...    | 8    | 94    | 40    | 174     | 151        | 38       | ...       | ...       | 250    | 230      | 505    | 0.73                                     | 0.65     | 0.69   | 0.17  | 3    |    |
| 4                      | Karnal          | 25                       | 13   | 1,393                    | 37   | ...      | ...       | ...    | 1      | 8    | 39    | 102   | 111     | 104        | 7        | ...       | ...       | 211    | 161      | 372    | 0.48                                     | 0.44     | 0.47   | 0.24  | 4    |    |
| 5                      | Ambala          | 19                       | 6  | 1,715                    | 7  | ...      | ...       | ...    | 4      | ...  | 20    | 26    | ...     | 7          | ...      | ...       | ...       | 34     | 25       | 59     | 0.10                                     | 0.09     | 0.09   | 0.16  | 5    |    |
| 6                      | Simla           | 3                        | ...  | 23                       | ...  | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...    | ...                                      | ...      | ...    | 0.08  | ...  |    |
| JULLUNDUR DIVISION.    |                 |                          |  |                          |  |          |           |        |        |      |       |       |         |            |          |           |           |        |          |        |  |          |        |   |      |    |
| 7                      | Kangra          | 15                       | 2  | 713                      | 4  | ...      | ...       | ...    | ...    | 12   | 1     | ...   | ...     | 1          | ...      | ...       | ...       | 12     | 3        | 14     | 0.03                                     | 0.01     | 0.02   | 0.30  | 7    |    |
| 8                      | Hoshiarpur      | 23                       | 5  | 2,108                    | 9  | ...      | ...       | ...    | ...    | ...  | 3     | ...   | 4       | 9          | ...      | ...       | ...       | 8      | 8        | 16     | 0.02                                     | 0.02     | 0.02   | 0.14  | 8    |    |
| 9                      | Jullundur       | 17                       | 12   | 1,215                    | 16   | ...      | ...       | ...    | 6      | 1    | 26    | 15    | 24      | 45         | ...      | ...       | ...       | 75     | 53       | 127    | 0.17                                     | 0.15     | 0.16   | 0.23  | 9    |    |
| 10                     | Ludhiana        | 14                       | 3  | 658                      | 3  | ...      | ...       | ...    | 3      | 3    | 6     | ...   | ...     | ...        | ...      | ...       | ...       | 6      | 5        | 11     | 0.02                                     | 0.02     | 0.02   | 0.41  | 10   |    |
| 11                     | Ferozepore      | 25                       | 12   | 1,499                    | 20   | ...      | ...       | ...    | 3      | 94   | 32    | 41    | 93      | 5          | ...      | ...       | ...       | 161    | 107      | 268    | 0.31                                     | 0.26     | 0.29   | 0.77  | 11   |    |
| LAHORE DIVISION.       |                 |                          |  |                          |  |          |           |        |        |      |       |       |         |            |          |           |           |        |          |        |  |          |        |   |      |    |
| 12                     | Lahore          | 31                       | 20   | 1,191                    | 40   | ...      | ...       | ...    | 1      | 3    | 1     | 43    | 138     | 275        | 21       | ...       | ...       | 259    | 222      | 481    | 0.45                                     | 0.51     | 0.47   | 0.73  | 12   |    |
| 13                     | Amritsar        | 15                       | 13   | 1,039                    | 55   | ...      | ...       | ...    | 4      | ...  | 8     | 9     | 169     | 252        | 17       | ...       | ...       | 280    | 179      | 459    | 0.57                                     | 0.47     | 0.52   | 0.53  | 13   |    |
| 14                     | Gurdaspur       | 22                       | 7  | 2,208                    | 3  | ...      | ...       | ...    | 1      | 2    | 6     | ...   | 6       | 36         | 4        | ...       | ...       | 32     | 23       | 55     | 0.07                                     | 0.06     | 0.07   | 0.13  | 14   |    |
| 15                     | Sialkot         | 20                       | 7  | 2,319                    | 3  | ...      | ...       | ...    | ...    | ...  | ...   | ...   | 20      | 40         | ...      | ...       | ...       | 47     | 22       | 69     | 0.09                                     | 0.05     | 0.07   | 0.15  | 15   |    |
| 16                     | Gujranwala      | 25                       | 11   | 1,733                    | 71   | ...      | ...       | ...    | 3      | 68   | 253   | 370   | 71      | 60         | 3        | ...       | ...       | 506    | 352      | 858    | 0.28                                     | 0.27     | 0.10   | 0.19  | 16   |    |
| RAWALPINDI DIVISION.   |                 |                          |  |                          |  |          |           |        |        |      |       |       |         |            |          |           |           |        |          |        |  |          |        |   |      |    |
| 17                     | Gujrat          | 17                       | 12   | 1,326                    | 21   | ...      | ...       | ...    | 2      | 5    | 19    | 55    | 56      | 135        | 4        | ...       | ...       | 129    | 137      | 266    | 0.32                                     | 0.40     | 0.36   | 0.38  | 17   |    |
| 18                     | Shahpur         | 23                       | 8  | 1,054                    | 32   | ...      | ...       | ...    | ...    | 5    | 76    | 101   | 41      | 6          | ...      | ...       | ...       | 138    | 91       | 229    | 0.37                                     | 0.29     | 0.33   | 0.07  | 18   |    |
| 19                     | Jhelum          | 14                       | 8  | 898                      | 13   | ...      | ...       | ...    | ...    | ...  | 7     | 93    | 4       | ...        | ...      | ...       | ...       | 53     | 52       | 104    | 0.20                                     | 0.21     | 0.21   | 0.03  | 19   |    |
| 20                     | Rawalpindi      | 14                       | 13   | 1,177                    | 65   | ...      | ...       | ...    | ...    | ...  | 102   | 241   | 86      | 169        | 3        | ...       | ...       | 330    | 271      | 601    | 1.28                                     | 1.13     | 1.18   | 0.08  | 20   |    |
| 21                     | Attock          | 13                       | 13   | 629                      | 26   | ...      | ...       | ...    | ...    | ...  | 303   | 1,604 | 100     | 15         | ...      | ...       | ...       | 1,162  | 690      | 2,022  | 4.30                                     | 3.51     | 3.92   | 0.004   | 21   |    |
| 22                     | Mianwali        | 15                       | 5  | 396                      | 10   | ...      | ...       | ...    | ...    | ...  | 115   | 195   | 14      | ...        | ...      | ...       | ...       | 173    | 151      | 324    | 0.46                                     | 0.44     | 0.65   | 0.02  | 22   |    |
| MULTAN DIVISION.       |                 |                          |  |                          |  |          |           |        |        |      |       |       |         |            |          |           |           |        |          |        |  |          |        |   |      |    |
| 23                     | Montgomery      | 21                       | 1  | 2,429                    | ...  | ...      | ...       | ...    | ...    | ...  | ...   | 1     | 3       | ...        | ...      | ...       | ...       | 3      | 1        | 4      | 0.01                                     | 0.004    | 0.01   | 0.24  | 23   |    |
| 24                     | Lyallpur        | 21                       | 17   | 1,277                    | 139  | ...      | ...       | ...    | ...    | 4    | 217   | 712   | 292     | 162        | 3        | ...       | ...       | 766    | 614      | 1,380  | 1.52                                     | 1.59     | 1.55   | 0.22  | 24   |    |
| 25                     | Jhang           | 12                       | 7  | 955                      | 17   | ...      | ...       | ...    | ...    | 1    | 6     | 60    | 45      | 11         | 1        | ...       | ...       | 64     | 60       | 124    | 0.23                                     | 0.25     | 0.24   | 0.02  | 25   |    |
| 26                     | Multan          | 20                       | 3  | 1,353                    | 3  | ...      | ...       | ...    | 3      | 36   | ...   | 3     | ...     | ...        | ...      | ...       | ...       | 28     | 13       | 41     | 0.06                                     | 0.04     | 0.05   | 0.09  | 26   |    |
| 27                     | Muzaffargarh    | 23                       | 1  | 940                      | 1  | ...      | ...       | ...    | 1      | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 1        | 1      | ...                                      | 0.003    | 0.002  | 0.01  | 0.27 | 27 |
| 28                     | Dera Ghazi Khan | 23                       | 4  | 707                      | 6  | ...      | ...       | ...    | 3      | 24   | 40    | ...   | ...     | ...        | ...      | ...       | ...       | 34     | 33       | 67     | 0.12                                     | 0.15     | 0.13   | 0.01  | 28   |    |
| Total for the Province |                 | 561                      | 223  | 34,193                   | 744  | ...      | ...       | ...    | 35     | 273  | 1,436 | 3,762 | 1,464   | 1,400      | 101      | ...       | ...       | 4,958  | 3,705    | 8,561  | 0.46                                     | 0.42     | 0.44   | 0.24  | ...  |    |



## ANNUAL FORM

## DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

| 1                      | 2                     | 3                        |  | 4                        |  | 5        |           |        |        |       |       |       |
|------------------------|-----------------------|--------------------------|--|--------------------------|--|----------|-----------|--------|--------|-------|-------|-------|
| No.                    | DISTRICTS.            | CIRCLES OF REGISTRATION. |  | VILLAGES.                |  | MONTHS.  |           |        |        |       |       |       |
|                        |                       | Number in each district. | Number from which deaths from small pox were reported. | Number in each district. | Number from which deaths from small pox were reported. | January. | February. | March. | April. | May.  | June. | July. |
| 1                      | 2                     | 3                        | 4  | 5                        | 6  | 7        | 8         | 9      | 10     | 11    | 12    | 13    |
| AMBALA DIVISION.       |                       |                          |  |                          |  |          |           |        |        |       |       |       |
| 1                      | Hissar ... ..         | 27                       | 22   | 963                      | 261  | 49       | 58        | 186    | 230    | 233   | 209   | 116   |
| 2                      | Rohtak ... ..         | 19                       | 14   | 781                      | 23   | 3        | 9         | 9      | 20     | 4     | 4     | 6     |
| 3                      | Gurgaon ... ..        | 24                       | 13   | 1,367                    | 24   | 6        | 12        | 21     | 31     | 14    | 11    | ...   |
| 4                      | Karnal ... ..         | 25                       | 25   | 1,382                    | 133  | 14       | 26        | 32     | 46     | 81    | 109   | 26    |
| 5                      | Ambala ... ..         | 19                       | 18   | 1,715                    | 110  | 4        | 8         | 15     | 24     | 47    | 62    | 35    |
| 6                      | Simla ... ..          | 3                        | 3  | 28                       | 4  | 3        | ...       | 2      | 8      | 1     | 1     | ...   |
| JULLUNDUR DIVISION.    |                       |                          |  |                          |  |          |           |        |        |       |       |       |
| 7                      | Kangra ... ..         | 15                       | 14   | 718                      | 45   | 17       | 20        | 25     | 25     | 11    | 7     | 6     |
| 8                      | Hoshiarpur ... ..     | 28                       | 23   | 2,108                    | 573  | 136      | 142       | 156    | 203    | 290   | 463   | 236   |
| 9                      | Jullundur ... ..      | 17                       | 17   | 1,215                    | 131  | 94       | 39        | 25     | 32     | 52    | 56    | 38    |
| 10                     | Ludhiana ... ..       | 14                       | 13   | 853                      | 210  | 118      | 91        | 75     | 54     | 100   | 130   | 37    |
| 11                     | Ferozepore ... ..     | 25                       | 25   | 1,499                    | 114  | 91       | 149       | 183    | 195    | 334   | 290   | 178   |
| LAHORE DIVISION.       |                       |                          |  |                          |  |          |           |        |        |       |       |       |
| 12                     | Lahore ... ..         | 31                       | 30   | 1,191                    | 262  | 204      | 152       | 105    | 97     | 152   | 131   | 132   |
| 13                     | Amritsar ... ..       | 15                       | 15   | 1,039                    | 109  | 56       | 58        | 43     | 45     | 49    | 90    | 79    |
| 14                     | Gurdaspur ... ..      | 22                       | 21   | 2,238                    | 216  | 51       | 39        | 44     | 60     | 82    | 117   | 53    |
| 15                     | Sialkot ... ..        | 30                       | 28   | 2,349                    | 248  | 38       | 70        | 54     | 40     | 120   | 176   | 111   |
| 16                     | Gujranwala ... ..     | 35                       | 23   | 1,733                    | 90   | 95       | 96        | 66     | 39     | 45    | 8     | 44    |
| RAWALPINDI DIVISION.   |                       |                          |  |                          |  |          |           |        |        |       |       |       |
| 17                     | Gujrat ... ..         | 17                       | 15   | 1,326                    | 37   | 24       | 36        | 14     | 20     | 32    | 83    | 61    |
| 18                     | Shahpur ... ..        | 23                       | 22   | 1,054                    | 78   | 18       | 16        | 12     | 13     | 44    | 63    | 72    |
| 19                     | Jhelum ... ..         | 14                       | 14   | 898                      | 218  | 16       | 21        | 37     | 45     | 73    | 153   | 109   |
| 20                     | Rawalpindi ... ..     | 14                       | 11   | 1,177                    | 66   | 10       | 20        | 16     | 11     | 10    | 44    | 29    |
| 21                     | Attock ... ..         | 13                       | 12   | 628                      | 50   | 13       | 11        | 6      | 3      | 19    | 41    | 29    |
| 22                     | Mianwali ... ..       | 15                       | 7  | 396                      | 10   | ...      | 2         | ...    | 1      | 1     | ...   | 3     |
| MULTAN DIVISION.       |                       |                          |  |                          |  |          |           |        |        |       |       |       |
| 23                     | Montgomery ... ..     | 21                       | 21   | 2,438                    | 251  | 10       | 38        | 60     | 69     | 126   | 162   | 169   |
| 24                     | Lyallpur ... ..       | 21                       | 21   | 1,277                    | 86   | 21       | 31        | 47     | 101    | 138   | 245   | 176   |
| 25                     | Jhang ... ..          | 13                       | 10   | 955                      | 30   | 3        | 3         | ...    | 5      | 21    | 52    | 31    |
| 26                     | Multan ... ..         | 20                       | 16   | 1,353                    | 46   | 11       | 8         | 11     | 7      | 24    | 6     | 31    |
| 27                     | Muzaffargarh ... ..   | 23                       | 9  | 850                      | 10   | 1        | ...       | 1      | 4      | 3     | ...   | 1     |
| 28                     | Dera Ghazi Khan... .. | 23                       | 6  | 707                      | 7  | ...      | ...       | 1      | 3      | 1     | 4     | ...   |
| Total for the Province |                       | 661                      | 467  | 34,193                   | 3,442  | 1,108    | 1,155     | 1,195  | 1,442  | 2,108 | 2,717 | 1,863 |



## No. VIII.

## OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1919.

|         |            |          |           |           | 6      |          |        | 7                                |                                    | 8  |          |        | 9   | 10  |
|---------|------------|----------|-----------|-----------|--------|----------|--------|----------------------------------|------------------------------------|--|----------|--------|---|-----|
|         |            |          |           |           | TOTAL. |          |        | NUMBER OF DEATHS AMONG CHILDREN. |                                    | RATIO OF DEATHS PER 1,000 OF POPULATION. |          |        | Mean ratio per 1,000 for previous five years. | No. |
| August. | September. | October. | November. | December. | Males. | Females. | Total. | Under one year.                  | Over one year and under ten years. | Males.                                   | Females. | Total. |   |     |
| 14      | 15         | 16       | 17        | 18        | 19     | 20       | 21     | 22                               | 23                                 | 24                                       | 25       | 26     | 27  | 28  |
| 26      | 6          | ...      | ...       | ...       | 561    | 502      | 1,063  | 201                              | 605                                | 1.28                                     | 1.37     | 1.32   | 0.14  | 1   |
| 4       | 4          | ...      | ...       | ...       | 36     | 27       | 63     | 20                               | 34                                 | 0.09                                     | 0.08     | 0.09   | 0.09  | 2   |
| 1       | 1          | ...      | 1         | ...       | 48     | 50       | 98     | 21                               | 65                                 | 0.12                                     | 0.15     | 0.13   | 0.10  | 3   |
| 7       | 5          | 1        | ...       | 10        | 187    | 170      | 357    | 98                               | 189                                | 0.43                                     | 0.47     | 0.45   | 0.13  | 4   |
| 7       | 13         | 15       | 19        | 23        | 146    | 136      | 282    | 62                               | 113                                | 0.41                                     | 0.49     | 0.45   | 0.10  | 5   |
| ...     | ...        | ...      | ...       | ...       | 9      | 6        | 15     | 2                                | 1                                  | 0.41                                     | 0.46     | 0.43   | 0.06  | 6   |
| ...     | ...        | 1        | 6         | 4         | 86     | 36       | 122    | 10                               | 11                                 | 0.22                                     | 0.13     | 0.16   | 0.01  | 7   |
| 109     | 49         | 40       | 66        | 102       | 1,026  | 963      | 1,994  | 502                              | 768                                | 2.05                                     | 2.32     | 2.17   | 0.06  | 8   |
| 9       | 13         | 8        | 13        | 20        | 198    | 301      | 309    | 89                               | 189                                | 0.45                                     | 0.58     | 0.51   | 0.08  | 9   |
| 23      | 7          | 2        | 4         | ...       | 316    | 325      | 641    | 147                              | 300                                | 1.08                                     | 1.45     | 1.24   | 0.21  | 10  |
| 85      | 36         | 30       | 53        | 83        | 906    | 801      | 1,707  | 380                              | 941                                | 1.74                                     | 1.94     | 1.83   | 0.24  | 11  |
| 83      | 40         | 12       | 40        | 49        | 652    | 585      | 1,247  | 326                              | 765                                | 1.14                                     | 1.34     | 1.23   | 0.49  | 12  |
| 20      | 23         | 20       | 26        | 63        | 334    | 239      | 573    | 150                              | 293                                | 0.67                                     | 0.62     | 0.65   | 0.30  | 13  |
| 29      | 29         | 9        | 6         | 28        | 288    | 264      | 552    | 157                              | 230                                | 0.63                                     | 0.72     | 0.65   | 0.07  | 14  |
| 46      | 18         | 7        | 27        | 47        | 394    | 330      | 754    | 173                              | 380                                | 0.74                                     | 0.83     | 0.78   | 0.04  | 15  |
| ...     | ...        | ...      | 5         | 9         | 214    | 194      | 408    | 190                              | 161                                | 0.41                                     | 0.43     | 0.44   | 0.03  | 16  |
| 34      | 33         | 12       | 20        | 51        | 226    | 194      | 420    | 139                              | 199                                | 0.56                                     | 0.56     | 0.56   | 0.04  | 17  |
| 30      | 11         | 6        | 30        | 89        | 219    | 185      | 404    | 111                              | 203                                | 0.58                                     | 0.60     | 0.59   | 0.04  | 18  |
| 31      | 23         | 41       | 106       | 206       | 419    | 442      | 861    | 164                              | 524                                | 1.60                                     | 1.83     | 1.71   | 0.02  | 19  |
| 17      | 15         | 12       | 14        | 21        | 114    | 105      | 219    | 41                               | 108                                | 0.43                                     | 0.44     | 0.43   | 0.01  | 20  |
| 25      | 12         | 9        | 39        | 66        | 158    | 115      | 273    | 65                               | 163                                | 0.53                                     | 0.47     | 0.53   | 0.02  | 21  |
| 2       | ...        | ...      | 2         | 4         | 10     | 5        | 15     | 3                                | 6                                  | 0.06                                     | 0.03     | 0.04   | 0.07  | 22  |
| 139     | 67         | 20       | 109       | 291       | 708    | 622      | 1,330  | 321                              | 779                                | 2.56                                     | 2.73     | 2.64   | 0.17  | 23  |
| 77      | 33         | 29       | 92        | 180       | 629    | 541      | 1,170  | 289                              | 659                                | 1.25                                     | 1.40     | 1.32   | 0.10  | 24  |
| 12      | 13         | 12       | 40        | 41        | 120    | 113      | 233    | 75                               | 97                                 | 0.43                                     | 0.47     | 0.45   | 0.02  | 25  |
| 6       | 1          | 4        | 5         | 18        | 67     | 65       | 132    | 23                               | 67                                 | 0.15                                     | 0.18     | 0.16   | 0.13  | 26  |
| ...     | ...        | ...      | ...       | 7         | 13     | 4        | 17     | 2                                | 7                                  | 0.04                                     | 0.02     | 0.03   | 0.11  | 27  |
| 1       | ...        | ...      | ...       | 6         | 9      | 7        | 16     | 2                                | 11                                 | 0.03                                     | 0.03     | 0.03   | 0.03  | 28  |
| 823     | 452        | 360      | 723       | 1,418     | 8,103  | 7,762    | 15,365 | 3,948                            | 7,862                              | 0.76                                     | 0.83     | 0.79   | 0.12  |     |



## DEATHS REGISTERED FROM FEVERS IN THE

| 1                      | 2                      | 3                        | 4   | 5                        |   |          |           |        |        |        |        |
|------------------------|------------------------|--------------------------|---|--------------------------|---|----------|-----------|--------|--------|--------|--------|
| No.                    | DISTRICTS.             | CIRCLES OF REGISTRATION. |   | VILLAGES.                |   | MONTHS.  |           |        |        |        |        |
|                        |                        | Number in each district. | Number from which deaths from fevers were reported. | Number in each district. | Number from which deaths from fevers were reported. | January. | February. | March. | April. | May.   | June.  |
| 1                      | 2                      | 3                        | 4   | 5                        | 6   | 7        | 8         | 9      | 10     | 11     | 12     |
| AMBALA DIVISION.       |                        |                          |   |                          |   |          |           |        |        |        |        |
| 1                      | Hissar ... ..          | 27                       | 27  | 963                      | 963   | 1,703    | 1,285     | 1,171  | 1,262  | 1,353  | 2,191  |
| 2                      | Rohtak ... ..          | 19                       | 19  | 731                      | 731   | 1,132    | 842       | 868    | 1,110  | 1,274  | 1,900  |
| 3                      | Gurgaon ... ..         | 24                       | 24  | 1,367                    | 1,363   | 1,335    | 1,009     | 980    | 1,076  | 1,204  | 1,329  |
| 4                      | Karnal ... ..          | 25                       | 25  | 1,382                    | 1,382   | 1,715    | 899       | 931    | 1,326  | 1,634  | 2,215  |
| 5                      | Ambala ... ..          | 19                       | 19  | 1,715                    | 1,715   | 1,242    | 725       | 726    | 614    | 831    | 867    |
| 6                      | Simla ... ..           | 3                        | 3   | 23                       | 23  | 57       | 26        | 18     | 22     | 40     | 23     |
| JULLUNDUR DIVISION.    |                        |                          |   |                          |   |          |           |        |        |        |        |
| 7                      | Kangra ... ..          | 15                       | 15  | 713                      | 603   | 2,364    | 1,514     | 869    | 824    | 1,032  | 1,188  |
| 8                      | Hoshiarpur ... ..      | 23                       | 23  | 2,108                    | 2,080   | 1,289    | 927       | 974    | 1,054  | 1,239  | 1,216  |
| 9                      | Jullundur ... ..       | 17                       | 17  | 1,315                    | 957   | 925      | 822       | 831    | 862    | 978    | 1,063  |
| 10                     | Ludhiana ... ..        | 14                       | 14  | 856                      | 803   | 699      | 457       | 480    | 425    | 502    | 555    |
| 11                     | Ferozepore ... ..      | 25                       | 25  | 1,499                    | 1,427   | 1,907    | 1,199     | 1,160  | 1,123  | 955    | 1,169  |
| LAHORE DIVISION.       |                        |                          |   |                          |   |          |           |        |        |        |        |
| 12                     | Lahore ... ..          | 31                       | 31  | 1,191                    | 1,134   | 1,454    | 1,128     | 1,076  | 1,029  | 1,356  | 1,676  |
| 13                     | Amritsar ... ..        | 15                       | 15  | 1,039                    | 1,031   | 1,505    | 1,099     | 980    | 946    | 1,219  | 1,318  |
| 14                     | Gurdaspur ... ..       | 22                       | 22  | 2,238                    | 1,679   | 1,093    | 639       | 636    | 653    | 735    | 814    |
| 15                     | Shalkot ... ..         | 30                       | 30  | 2,349                    | 2,210   | 1,284    | 973       | 858    | 709    | 1,075  | 1,141  |
| 16                     | Gujranwala ... ..      | 35                       | 35  | 1,733                    | 1,733   | 3,334    | 1,961     | 1,829  | 989    | 1,206  | 1,566  |
| RAWALPINDI DIVISION.   |                        |                          |   |                          |   |          |           |        |        |        |        |
| 17                     | Gujrat ... ..          | 17                       | 17  | 1,326                    | 1,233   | 1,700    | 1,243     | 991    | 767    | 812    | 999    |
| 18                     | Shahpur ... ..         | 23                       | 23  | 1,054                    | 1,054   | 1,349    | 907       | 833    | 734    | 660    | 965    |
| 19                     | Jhelum ... ..          | 14                       | 14  | 893                      | 893   | 779      | 663       | 650    | 533    | 573    | 694    |
| 20                     | Rawalpindi ... ..      | 14                       | 14  | 1,177                    | 931   | 757      | 589       | 615    | 497    | 515    | 566    |
| 21                     | Attock ... ..          | 13                       | 13  | 628                      | 628   | 1,264    | 981       | 759    | 728    | 651    | 672    |
| 22                     | Mianwali ... ..        | 15                       | 15  | 396                      | 396   | 1,009    | 686       | 638    | 164    | 553    | 583    |
| MULTAN DIVISION.       |                        |                          |   |                          |   |          |           |        |        |        |        |
| 23                     | Montgomery ... ..      | 21                       | 21  | 2,438                    | 1,331   | 1,941    | 1,381     | 993    | 681    | 820    | 756    |
| 24                     | Lyallpur ... ..        | 21                       | 21  | 1,277                    | 1,277   | 1,232    | 915       | 1,021  | 943    | 1,431  | 1,503  |
| 25                     | Jhang ... ..           | 13                       | 13  | 955                      | 803   | 1,372    | 844       | 783    | 583    | 543    | 567    |
| 26                     | Multan ... ..          | 20                       | 20  | 1,353                    | 1,353   | 2,697    | 1,825     | 1,563  | 1,133  | 1,108  | 1,065  |
| 27                     | Muzaffargarh ... ..    | 23                       | 23  | 860                      | 703   | 1,746    | 1,311     | 1,115  | 921    | 1,025  | 872    |
| 28                     | Dera Ghazi Khan ... .. | 23                       | 23  | 707                      | 650   | 1,150    | 734       | 791    | 852    | 1,124  | 1,008  |
| Total for the Province |                        | 561                      | 561   | 34,193                   | 31,153  | 40,038   | 27,584    | 25,142 | 22,965 | 26,498 | 30,496 |



## No. IX.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1919.

|        |         |            |          |           |           | 6       |          |         | 7  |          |        | 8   | 9   |
|--------|---------|------------|----------|-----------|-----------|---------|----------|---------|--|----------|--------|---|-----|
|        |         |            |          |           |           | TOTAL   |          |         | RATIO OF DEATHS PER 1,000 OF POPULATION. |          |        | Mean ratio per 1,000 for previous five years. | No. |
| July.  | August. | September. | October. | November. | December. | Males.  | Females. | Total.  | Males.                                   | Females. | Total. |   |     |
| 13     | 14      | 15         | 16       | 17        | 18        | 19      | 20       | 21      | 22                                       | 23       | 24     | 25  | 26  |
| 1,198  | 786     | 1,081      | 1,535    | 1,198     | 1,031     | 8,810   | 7,425    | 15,745  | 18-95                                    | 20-29    | 19-58  | 32-77   | 1   |
| 898    | 660     | 1,092      | 1,813    | 1,793     | 1,354     | 7,746   | 6,987    | 14,733  | 20-10                                    | 21-21    | 20-61  | 34-68   | 2   |
| 759    | 655     | 1,461      | 3,315    | 3,057     | 2,228     | 9,504   | 8,905    | 18,409  | 24-42                                    | 23-19    | 25-25  | 40-95   | 3   |
| 1,254  | 1,037   | 1,712      | 2,660    | 2,540     | 2,027     | 10,508  | 9,442    | 19,950  | 24-01                                    | 26-08    | 24-94  | 31-83   | 4   |
| 725    | 675     | 1,304      | 2,083    | 2,020     | 1,809     | 7,235   | 6,886    | 13,571  | 20-24                                    | 23-03    | 21-45  | 28-61   | 5   |
| 47     | 66      | 54         | 57       | 48        | 80        | 323     | 215      | 538     | 14-67                                    | 16-60    | 15-38  | 13-04   | 6   |
| 1,072  | 1,076   | 1,677      | 1,610    | 1,395     | 1,747     | 8,272   | 8,096    | 16,368  | 20-76                                    | 21-98    | 21-35  | 23-08   | 7   |
| 936    | 1,080   | 1,968      | 2,408    | 2,042     | 2,092     | 8,791   | 8,459    | 17,250  | 17-53                                    | 20-23    | 18-78  | 26-12   | 8   |
| 815    | 984     | 1,409      | 1,639    | 1,602     | 1,528     | 6,950   | 6,548    | 13,498  | 15-55                                    | 18-85    | 17-00  | 23-30   | 9   |
| 417    | 473     | 729        | 898      | 955       | 802       | 3,747   | 3,645    | 7,392   | 12-77                                    | 16-30    | 14-29  | 24-19   | 10  |
| 963    | 697     | 1,154      | 1,329    | 1,768     | 1,467     | 7,993   | 6,928    | 14,921  | 15-35                                    | 16-79    | 15-98  | 27-50   | 11  |
| 1,316  | 1,047   | 1,565      | 1,413    | 1,438     | 1,517     | 8,656   | 7,424    | 16,080  | 14-69                                    | 17-02    | 15-80  | 25-68   | 12  |
| 1,188  | 1,190   | 1,576      | 1,545    | 1,771     | 1,692     | 8,592   | 7,447    | 16,039  | 17-34                                    | 19-40    | 18-24  | 29-49   | 13  |
| 671    | 686     | 1,235      | 1,883    | 1,460     | 1,264     | 6,352   | 5,517    | 11,869  | 13-63                                    | 15-06    | 14-26  | 25-74   | 14  |
| 824    | 866     | 1,809      | 2,282    | 1,967     | 1,826     | 8,275   | 7,839    | 15,614  | 15-59                                    | 16-97    | 16-21  | 25-77   | 15  |
| 1,700  | 1,072   | 1,467      | 1,891    | 2,108     | 2,449     | 11,798  | 9,774    | 21,572  | 22-77                                    | 24-12    | 23-36  | 36-70   | 16  |
| 1,010  | 770     | 1,465      | 2,024    | 1,760     | 1,652     | 7,836   | 7,354    | 15,190  | 19-56                                    | 21-31    | 20-37  | 25-89   | 17  |
| 937    | 558     | 625        | 779      | 794       | 839       | 5,339   | 4,641    | 9,980   | 14-17                                    | 14-95    | 14-52  | 26-43   | 18  |
| 622    | 463     | 795        | 955      | 960       | 969       | 4,644   | 4,002    | 8,646   | 17-71                                    | 16-54    | 17-15  | 24-19   | 19  |
| 630    | 521     | 750        | 781      | 946       | 989       | 4,165   | 3,991    | 8,156   | 15-56                                    | 16-63    | 16-07  | 25-08   | 20  |
| 766    | 600     | 712        | 701      | 871       | 710       | 4,929   | 4,496    | 9,425   | 18-23                                    | 18-36    | 18-29  | 23-35   | 21  |
| 550    | 397     | 571        | 506      | 540       | 646       | 3,778   | 3,465    | 7,243   | 21-00                                    | 21-46    | 21-22  | 35-34   | 22  |
| 581    | 576     | 571        | 878      | 930       | 1,167     | 6,056   | 5,219    | 11,275  | 21-93                                    | 22-89    | 22-37  | 33-60   | 23  |
| 1,437  | 1,005   | 1,179      | 1,077    | 1,331     | 1,370     | 7,561   | 6,948    | 14,449  | 14-89                                    | 18-04    | 16-26  | 24-56   | 24  |
| 509    | 449     | 538        | 578      | 707       | 776       | 4,213   | 4,036    | 8,249   | 15-20                                    | 16-93    | 16-00  | 27-65   | 25  |
| 786    | 758     | 1,017      | 1,301    | 1,517     | 1,667     | 8,638   | 7,800    | 16,438  | 19-84                                    | 21-31    | 20-61  | 34-19   | 26  |
| 728    | 556     | 707        | 978      | 1,371     | 1,732     | 7,068   | 5,994    | 13,062  | 22-92                                    | 22-96    | 22-94  | 37-00   | 27  |
| 562    | 449     | 519        | 582      | 611       | 901       | 5,340   | 4,143    | 9,483   | 19-60                                    | 18-21    | 18-97  | 33-92   | 28  |
| 23,919 | 20,050  | 30,837     | 39,441   | 39,742    | 38,331    | 192,459 | 172,586  | 365,045 | 18-14                                    | 19-77    | 18-88  | 29-00   |     |



## DEATHS REGISTERED FROM DYSENTERY AND DIARRHŒA IN THE

| 1                          | 2                   | 3                        |  | 4                        |  | 5        |           |        |        |      |       |
|----------------------------|---------------------|--------------------------|--|--------------------------|--|----------|-----------|--------|--------|------|-------|
| No.                        | Districts.          | CIRCLES OF REGISTRATION. |  | VILLAGES.                |  | MONTHS.  |           |        |        |      |       |
|                            |                     | Number in each district. | Number from which deaths from dysentery and diarrhoea were reported. | Number in each district. | Number from which deaths from dysentery and diarrhoea were reported. | January. | February. | March. | April. | May. | June. |
| 1                          | 2                   | 3                        | 4  | 5                        | 6  | 7        | 8         | 9      | 10     | 11   | 12    |
| AMBALA DIVISION.           |                     |                          |  |                          |  |          |           |        |        |      |       |
| 1                          | Hissar ...          | 27                       | 17   | 963                      | 139  | 17       | 4         | 6      | 15     | 42   | 41    |
| 2                          | Rohtak ...          | 19                       | 19   | 731                      | 143  | 16       | 13        | 8      | 13     | 31   | 36    |
| 3                          | Gurgaon ...         | 24                       | 24   | 1,367                    | 272  | 31       | 11        | 11     | 29     | 20   | 29    |
| 4                          | Karnal ...          | 25                       | 24   | 1,382                    | 108  | 14       | 3         | 7      | 20     | 15   | 20    |
| 5                          | Ambala ...          | 19                       | 16   | 1,715                    | 159  | 16       | 9         | 11     | 18     | 31   | 37    |
| 6                          | Simla ...           | 3                        | 3  | 23                       | 10   | 2        | 3         | 12     | 9      | 16   | 18    |
| JULLUNDUR DIVISION.        |                     |                          |  |                          |  |          |           |        |        |      |       |
| 7                          | Kangra ...          | 15                       | 15   | 713                      | 360  | 22       | 15        | 28     | 30     | 72   | 83    |
| 8                          | Hoshiarpur ...      | 23                       | 13   | 2,108                    | 25   | —        | 3         | 1      | 6      | 10   | 2     |
| 9                          | Jullundur ...       | 17                       | 17   | 1,215                    | 91   | 12       | 9         | 8      | 23     | 30   | 23    |
| 10                         | Ludhiana ...        | 14                       | 14   | 858                      | 57   | 13       | 12        | 8      | 19     | 19   | 16    |
| 11                         | Ferozepore ...      | 25                       | 25   | 1,499                    | 46   | 12       | 10        | 18     | 17     | 19   | 19    |
| LAHORE DIVISION.           |                     |                          |  |                          |  |          |           |        |        |      |       |
| 12                         | Lahore ...          | 31                       | 23   | 1,191                    | 53   | 37       | 24        | 33     | 34     | 47   | 42    |
| 13                         | Amritsar ...        | 15                       | 15   | 1,039                    | 139  | 16       | 19        | 16     | 19     | 33   | 28    |
| 14                         | Gurdaspur ...       | 22                       | 22   | 2,238                    | 423  | 19       | 6         | 9      | 21     | 51   | 30    |
| 15                         | Sialkot ...         | 30                       | 28   | 2,349                    | 189  | 29       | 14        | 17     | 28     | 54   | 56    |
| 16                         | Gujranwala ...      | 35                       | 29   | 1,733                    | 60   | 4        | 5         | 3      | 6      | 21   | 13    |
| RAWALPINDI DIVISION.       |                     |                          |  |                          |  |          |           |        |        |      |       |
| 17                         | Gujrat ...          | 17                       | 17   | 1,326                    | 81   | 11       | 6         | 7      | 19     | 24   | 19    |
| 18                         | Shahpur ...         | 23                       | 22   | 1,054                    | 63   | 4        | 9         | 12     | 15     | 18   | 33    |
| 19                         | Jhelum ...          | 14                       | 14   | 898                      | 86   | 13       | 3         | 7      | 15     | 21   | 9     |
| 20                         | Rawalpindi ...      | 14                       | 14   | 1,177                    | 267  | 140      | 118       | 129    | 119    | 143  | 78    |
| 21                         | Attock ...          | 13                       | 10   | 628                      | 12   | 1        | 1         | 2      | 1      | 3    | 5     |
| 22                         | Mianwali ...        | 16                       | 15   | 396                      | 62   | 13       | 6         | 12     | 13     | 19   | 17    |
| MULTAN DIVISION.           |                     |                          |  |                          |  |          |           |        |        |      |       |
| 23                         | Montgomery ...      | 21                       | 16   | 2,438                    | 22   | —        | 3         | —      | 3      | 1    | 7     |
| 24                         | Lyallpur ...        | 21                       | 20   | 1,277                    | 92   | 18       | 9         | 19     | 35     | 33   | 13    |
| 25                         | Jhang ...           | 13                       | 13   | 955                      | 109  | 17       | 9         | 9      | 16     | 35   | 18    |
| 26                         | Multan ...          | 20                       | 18   | 1,353                    | 41   | 12       | 10        | 11     | 15     | 17   | 10    |
| 27                         | Muzaffargarh ...    | 23                       | 15   | 860                      | 14   | 3        | 1         | 9      | 1      | 5    | 2     |
| 28                         | Dera Ghazi Khan ... | 23                       | 14   | 707                      | 19   | —        | —         | —      | 6      | 11   | 2     |
| Total for the Province ... |                     | 561                      | 497  | 34,193                   | 3,147  | 492      | 335       | 418    | 565    | 847  | 707   |



## No. X.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1919.

|       |         |            |          |           |           | 6      |          |        | 7  |          |        | 8   | 9   |
|-------|---------|------------|----------|-----------|-----------|--------|----------|--------|--|----------|--------|---|-----|
|       |         |            |          |           |           | TOTAL. |          |        | RATIO OF DEATHS PER 1,000 OF POPULATION. |          |        | Mean ratio per 1,000 for previous five years. | No. |
| July. | August. | September. | October. | November. | December. | Males. | Females. | Total. | Males.                                   | Females. | Total. |   |     |
| 13    | 14      | 15         | 16       | 17        | 18        | 19     | 20       | 21     | 22                                       | 23       | 24     | 25  | 26  |
| 25    | 26      | 92         | 27       | 1         | 16        | 163    | 176      | 339    | 0.37                                     | 0.48     | 0.42   | 0.68  | 1   |
| 13    | 23      | 44         | 49       | 34        | 37        | 173    | 144      | 317    | 0.45                                     | 0.44     | 0.44   | 0.53  | 2   |
| 18    | 20      | 66         | 69       | 94        | 76        | 262    | 248      | 510    | 0.67                                     | 0.73     | 0.70   | 0.95  | 3   |
| 11    | 27      | 28         | 30       | 32        | 26        | 156    | 107      | 263    | 0.29                                     | 0.10     | 0.29   | 0.47  | 4   |
| 26    | 27      | 40         | 52       | 43        | 58        | 274    | 144      | 368    | 0.63                                     | 0.52     | 0.58   | 0.88  | 5   |
| 16    | 9       | 3          | 2        | 3         | 2         | 53     | 41       | 94     | 2.41                                     | 3.16     | 2.69   | 1.40  | 6   |
| 29    | 42      | 56         | 32       | 31        | 23        | 223    | 240      | 463    | 0.56                                     | 0.65     | 0.60   | 1.31  | 7   |
| 1     | 6       | 5          | 2        | 3         | 2         | 24     | 17       | 41     | 0.05                                     | 0.04     | 0.04   | 0.04  | 8   |
| 21    | 29      | 43         | 26       | 36        | 16        | 163    | 116      | 279    | 0.37                                     | 0.33     | 0.35   | 0.51  | 9   |
| 14    | 19      | 31         | 24       | 23        | 23        | 137    | 94       | 221    | 0.43                                     | 0.42     | 0.43   | 0.47  | 10  |
| 17    | 22      | 23         | 33       | 23        | 26        | 132    | 107      | 239    | 0.25                                     | 0.26     | 0.26   | 0.54  | 11  |
| 23    | 26      | 70         | 39       | 57        | 42        | 298    | 191      | 489    | 0.51                                     | 0.44     | 0.48   | 0.63  | 12  |
| 22    | 31      | 66         | 30       | 36        | 24        | 197    | 133      | 330    | 0.40                                     | 0.35     | 0.38   | 1.11  | 13  |
| 19    | 43      | 90         | 92       | 66        | 49        | 299    | 201      | 500    | 0.64                                     | 0.55     | 0.60   | 1.43  | 14  |
| 26    | 43      | 80         | 79       | 52        | 51        | 319    | 225      | 544    | 0.60                                     | 0.52     | 0.56   | 1.24  | 15  |
| 16    | 13      | 10         | 13       | 15        | 13        | 63     | 54       | 137    | 0.16                                     | 0.13     | 0.15   | 0.30  | 16  |
| 12    | 21      | 51         | 56       | 33        | 9         | 164    | 103      | 267    | 0.41                                     | 0.30     | 0.36   | 0.50  | 17  |
| 20    | 21      | 33         | 27       | 22        | 22        | 144    | 92       | 236    | 0.38                                     | 0.30     | 0.34   | 0.41  | 18  |
| 31    | 13      | 11         | 21       | 15        | 15        | 101    | 73       | 174    | 0.39                                     | 0.30     | 0.35   | 0.41  | 19  |
| 19    | 77      | 149        | 193      | 187       | 215       | 828    | 739      | 1,567  | 3.09                                     | 3.08     | 3.09   | 3.78  | 20  |
| 4     | 13      | 13         | ...      | 4         | 2         | 27     | 22       | 49     | 0.10                                     | 0.09     | 0.10   | 0.07  | 21  |
| 25    | 12      | 17         | 12       | 5         | 9         | 67     | 73       | 160    | 0.48                                     | 0.45     | 0.47   | 0.61  | 22  |
| 4     | 4       | 8          | 5        | ...       | 6         | 22     | 19       | 41     | 0.05                                     | 0.08     | 0.08   | 0.11  | 23  |
| 61    | 46      | 73         | 22       | 15        | 8         | 194    | 153      | 352    | 0.39                                     | 0.41     | 0.40   | 0.38  | 24  |
| 16    | 34      | 64         | 32       | 21        | 9         | 156    | 124      | 280    | 0.56                                     | 0.52     | 0.54   | 0.65  | 25  |
| 33    | 42      | 38         | 39       | 28        | 24        | 164    | 115      | 279    | 0.38                                     | 0.31     | 0.35   | 0.38  | 26  |
| 4     | 10      | 7          | 12       | 10        | 6         | 41     | 29       | 70     | 0.13                                     | 0.11     | 0.12   | 0.15  | 27  |
| 8     | 4       | 8          | 11       | 6         | 3         | 36     | 24       | 60     | 0.13                                     | 0.11     | 0.12   | 0.49  | 28  |
| 543   | 748     | 1,212      | 1,043    | 917       | 812       | 4,830  | 3,809    | 8,639  | 0.46                                     | 0.44     | 0.45   | 0.70  |     |



## DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE

| 1                      | 2                   | 3                        |   | 4                        |   | 5        |           |        |        |       |       |
|------------------------|---------------------|--------------------------|---|--------------------------|---|----------|-----------|--------|--------|-------|-------|
| No.                    | DISTRICTS.          | CIRCLES OF REGISTRATION. |   | VILLAGES.                |   | MONTHS.  |           |        |        |       |       |
|                        |                     | Number in each district. | Number from which deaths from respiratory diseases were reported. | Number in each district. | Number from which deaths from respiratory diseases were reported. | January. | February. | March. | April. | May.  | June. |
| 1                      | 2                   | 3                        | 4   | 5                        | 6   | 7        | 8         | 9      | 10     | 11    | 12    |
| AMBALA DIVISION.       |                     |                          |   |                          |   |          |           |        |        |       |       |
| 1                      | Hissar ...          | 27                       | 22  | 963                      | 270   | 97       | 78        | 65     | 49     | 74    | 80    |
| 2                      | Rohtak ...          | 19                       | 19  | 731                      | 486   | 133      | 64        | 68     | 66     | 74    | 103   |
| 3                      | Gurgaon ...         | 24                       | 24  | 1,367                    | 453   | 76       | 70        | 62     | 71     | 91    | 90    |
| 4                      | Karnal ...          | 25                       | 25  | 1,382                    | 387   | 57       | 44        | 42     | 49     | 134   | 217   |
| 5                      | Ambala ...          | 19                       | 19  | 1,715                    | 1,203   | 156      | 125       | 160    | 184    | 326   | 453   |
| 6                      | Simla ...           | 8                        | 3   | 23                       | 21  | 4        | 10        | 4      | 6      | 12    | 9     |
| JULLUNDUR DIVISION.    |                     |                          |   |                          |   |          |           |        |        |       |       |
| 7                      | Kanra ...           | 15                       | 15  | 713                      | 640   | 526      | 287       | 260    | 220    | 249   | 259   |
| 8                      | Hoshiarpur ...      | 23                       | 23  | 2,108                    | 683   | 153      | 153       | 181    | 162    | 145   | 159   |
| 9                      | Jullundur ...       | 17                       | 17  | 1,215                    | 241   | 102      | 99        | 137    | 112    | 99    | 111   |
| 10                     | Ludhiana ...        | 14                       | 14  | 858                      | 229   | 95       | 75        | 79     | 48     | 102   | 62    |
| 11                     | Ferozepore ...      | 25                       | 25  | 1,499                    | 231   | 102      | 108       | 81     | 92     | 107   | 100   |
| LAHORE DIVISION.       |                     |                          |   |                          |   |          |           |        |        |       |       |
| 12                     | Lahore ...          | 31                       | 29  | 1,191                    | 414   | 228      | 167       | 149    | 138    | 165   | 147   |
| 13                     | Amritsar ...        | 15                       | 15  | 1,039                    | 517   | 267      | 161       | 172    | 149    | 231   | 285   |
| 14                     | Gurdaspur ...       | 22                       | 22  | 2,238                    | 1,897   | 641      | 577       | 573    | 461    | 552   | 406   |
| 15                     | Sialkot ...         | 30                       | 30  | 2,349                    | 1,197   | 269      | 251       | 238    | 178    | 264   | 252   |
| 16                     | Gujranwala ...      | 25                       | 25  | 1,733                    | 110   | 34       | 59        | 48     | 37     | 76    | 53    |
| RAWALPINDI DIVISION.   |                     |                          |   |                          |   |          |           |        |        |       |       |
| 17                     | Gujrat ...          | 17                       | 17  | 1,326                    | 409   | 187      | 134       | 168    | 117    | 128   | 84    |
| 18                     | Sialpur ...         | 23                       | 23  | 1,054                    | 309   | 72       | 61        | 55     | 59     | 51    | 68    |
| 19                     | Jhelum ...          | 14                       | 14  | 898                      | 387   | 93       | 76        | 74     | 87     | 76    | 88    |
| 20                     | Rawalpindi ...      | 14                       | 14  | 1,177                    | 489   | 119      | 127       | 75     | 74     | 79    | 157   |
| 21                     | Attock ...          | 13                       | 13  | 628                      | 180   | 22       | 33        | 35     | 35     | 62    | 44    |
| 22                     | Mianwali ...        | 15                       | 15  | 395                      | 131   | 7        | 5         | 9      | 13     | 33    | 30    |
| MULTAN DIVISION.       |                     |                          |   |                          |   |          |           |        |        |       |       |
| 23                     | Montgomery ...      | 21                       | 15  | 2,438                    | 43  | 14       | 9         | 5      | 6      | 12    | 12    |
| 24                     | Lyallpur ...        | 21                       | 21  | 1,277                    | 244   | 60       | 75        | 60     | 38     | 66    | 64    |
| 25                     | Jhang ...           | 13                       | 13  | 955                      | 147   | 10       | 14        | 14     | 32     | 37    | 25    |
| 26                     | Multan ...          | 20                       | 20  | 1,853                    | 158   | 68       | 62        | 59     | 59     | 76    | 73    |
| 27                     | Muzaffargarh ...    | 23                       | 23  | 890                      | 80  | 14       | 11        | 20     | 11     | 14    | 8     |
| 28                     | Dera Ghazi Khan ... | 23                       | 20  | 707                      | 41  | 2        | 2         | 2      | 15     | 9     | 111   |
| Total for the Province |                     | 561                      | 545   | 34,193                   | 11,537  | 3,603    | 2,947     | 2,895  | 2,568  | 3,875 | 3,456 |



## No. XI.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1919.

|       |         |            |          |           |           | 6      |          |        | 7  |          |        | 8   | 9   |
|-------|---------|------------|----------|-----------|-----------|--------|----------|--------|--|----------|--------|---|-----|
|       |         |            |          |           |           | TOTAL. |          |        | RATIO OF DEATHS PER 1,000 OF POPULATION. |          |        | Mean ratio per 1,000 for previous five years. | No. |
| July. | August. | September. | October. | November. | December. | Males. | Females. | Total. | Males.                                   | Females. | Total. |   |     |
| 13    | 14      | 15         | 16       | 17        | 18        | 19     | 20       | 21     | 22                                       | 23       | 24     | 25  | 26  |
| 42    | 35      | 57         | 44       | 50        | 65        | 418    | 319      | 737    | 0.85                                     | 0.87     | 0.92   | 1.49  | 1   |
| 67    | 59      | 90         | 96       | 115       | 118       | 541    | 512      | 1,053  | 1.40                                     | 1.55     | 1.47   | 1.70  | 2   |
| 62    | 76      | 95         | 94       | 105       | 137       | 513    | 513      | 1,026  | 1.32                                     | 1.51     | 1.41   | 2.09  | 3   |
| 68    | 51      | 81         | 122      | 108       | 127       | 590    | 510      | 1,100  | 1.35                                     | 1.41     | 1.38   | 1.86  | 4   |
| 179   | 156     | 197        | 241      | 378       | 381       | 1,594  | 1,302    | 2,896  | 4.46                                     | 4.73     | 4.58   | 5.06  | 5   |
| 11    | 6       | 4          | 2        | 1         | 41        | 60     | 50       | 110    | 2.73                                     | 3.86     | 3.15   | 5.67  | 6   |
| 142   | 143     | 274        | 279      | 365       | 528       | 1,879  | 1,653    | 3,532  | 4.72                                     | 4.49     | 4.61   | 3.42  | 7   |
| 144   | 146     | 170        | 285      | 276       | 320       | 1,331  | 914      | 2,245  | 2.65                                     | 2.19     | 2.44   | 2.66  | 8   |
| 104   | 125     | 145        | 140      | 161       | 186       | 819    | 642      | 1,521  | 2.00                                     | 1.85     | 1.93   | 3.49  | 9   |
| 64    | 54      | 81         | 78       | 96        | 126       | 545    | 415      | 960    | 1.86                                     | 1.86     | 1.86   | 2.62  | 10  |
| 75    | 89      | 99         | 100      | 131       | 149       | 715    | 518      | 1,233  | 1.87                                     | 1.26     | 1.32   | 1.90  | 11  |
| 111   | 139     | 154        | 128      | 147       | 251       | 1,074  | 850      | 1,924  | 1.85                                     | 1.95     | 1.89   | 2.14  | 12  |
| 203   | 249     | 287        | 255      | 270       | 298       | 1,548  | 1,309    | 2,857  | 3.12                                     | 3.41     | 3.25   | 4.64  | 13  |
| 123   | 171     | 214        | 657      | 613       | 822       | 2,915  | 2,895    | 5,810  | 6.25                                     | 6.54     | 6.88   | 11.51   | 14  |
| 198   | 218     | 310        | 294      | 258       | 349       | 1,682  | 1,401    | 3,083  | 3.17                                     | 3.24     | 3.20   | 5.16  | 15  |
| 38    | 58      | 35         | 18       | 48        | 80        | 350    | 239      | 589    | 0.68                                     | 0.59     | 0.64   | 0.98  | 16  |
| 95    | 104     | 138        | 98       | 141       | 154       | 879    | 669      | 1,548  | 2.19                                     | 1.94     | 2.08   | 2.83  | 17  |
| 33    | 39      | 30         | 49       | 73        | 104       | 435    | 259      | 694    | 1.15                                     | 0.83     | 1.01   | 1.28  | 18  |
| 82    | 66      | 80         | 67       | 78        | 144       | 552    | 429      | 1,011  | 2.22                                     | 1.77     | 2.01   | 2.02  | 19  |
| 182   | 133     | 47         | 82       | 124       | 161       | 760    | 600      | 1,360  | 2.84                                     | 2.50     | 2.68   | 2.66  | 20  |
| 42    | 62      | 56         | 60       | 53        | 72        | 312    | 264      | 576    | 1.15                                     | 1.08     | 1.12   | 1.54  | 21  |
| 27    | 22      | 34         | 20       | 43        | 23        | 159    | 107      | 266    | 0.88                                     | 0.66     | 0.78   | 0.60  | 22  |
| 3     | 2       | 5          | 6        | 9         | 18        | 61     | 40       | 101    | 0.22                                     | 0.18     | 0.20   | 0.34  | 23  |
| 47    | 46      | 71         | 52       | 76        | 69        | 430    | 294      | 724    | 0.85                                     | 0.76     | 0.81   | 0.92  | 24  |
| 34    | 18      | 37         | 33       | 26        | 4         | 168    | 114      | 282    | 0.61                                     | 0.48     | 0.55   | 1.13  | 25  |
| 62    | 59      | 55         | 89       | 60        | 54        | 399    | 372      | 771    | 0.91                                     | 1.02     | 0.96   | 0.38  | 26  |
| 10    | 20      | 12         | 12       | 20        | 50        | 127    | 75       | 202    | 0.41                                     | 0.29     | 0.35   | 0.30  | 27  |
| 10    | 8       | 9          | 10       | 11        | 13        | 65     | 37       | 102    | 0.24                                     | 0.16     | 0.20   | 0.71  | 28  |
| 2,258 | 2,354   | 2,867      | 2,263    | 3,787     | 4,840     | 21,011 | 16,802   | 37,813 | 1.04                                     | 1.92     | 1.96   | 2.60  |     |



## DEATHS REGISTERED FROM PLAGUE IN THE

| 1                          | 2                      | 3                        |   | 4                        |   | 5        |           |        |        |       |       |
|----------------------------|------------------------|--------------------------|---|--------------------------|---|----------|-----------|--------|--------|-------|-------|
| No.                        | DISTRICTS.             | CIRCLES OF REGISTRATION. |   | VILLAGES.                |   | MONTHS.  |           |        |        |       |       |
|                            |                        | Number in each district. | Number from which deaths from plague were reported. | Number in each district. | Number from which deaths from plague were reported. | January. | February. | March. | April. | May.  | June. |
| 1                          | 2                      | 3                        | 4   | 5                        | 6   | 7        | 8         | 9      | 10     | 11    | 12    |
| AMBALA DIVISION.           |                        |                          |   |                          |   |          |           |        |        |       |       |
| 1                          | Hissar ... ..          | 27                       | 7   | 963                      | 7   | 17       | 21        | 99     | 268    | 67    | ...   |
| 2                          | Rohtak ... ..          | 19                       | 13  | 731                      | 45  | 57       | 199       | 847    | 1,212  | 783   | 68    |
| 3                          | Gurgaon ... ..         | 24                       | 6   | 1,367                    | 6   | ...      | ...       | 5      | 43     | 29    | ...   |
| 4                          | Karnal ... ..          | 25                       | 3   | 1,322                    | 1   | ...      | ...       | ...    | 2      | 11    | 2     |
| 5                          | Ambala ... ..          | 19                       | 2   | 1,715                    | 2   | ...      | 13        | 29     | 17     | 2     | ...   |
| 6                          | Simla ... ..           | 3                        | ...   | 23                       | ...   | ...      | ...       | ...    | ...    | ...   | ...   |
| JULLUNDUR DIVISION.        |                        |                          |   |                          |   |          |           |        |        |       |       |
| 7                          | Kangra ... ..          | 15                       | ...   | 713                      | ...   | ...      | ...       | ...    | ...    | ...   | ...   |
| 8                          | Hoshiarpur ... ..      | 23                       | 5   | 2,108                    | 14  | ...      | 5         | 4      | 19     | 43    | 4     |
| 9                          | Jullundur ... ..       | 17                       | 5   | 1,215                    | 11  | ...      | ...       | 34     | 73     | 42    | ...   |
| 10                         | Ludhiana ... ..        | 14                       | 2   | 858                      | 2   | ...      | ...       | 38     | 25     | ...   | ...   |
| 11                         | Ferozepore ... ..      | 25                       | 13  | 1,469                    | 23  | 1        | 28        | 254    | 533    | 320   | 26    |
| LAHORE DIVISION.           |                        |                          |   |                          |   |          |           |        |        |       |       |
| 12                         | Lahore ... ..          | 31                       | 18  | 1,191                    | 92  | 1        | 55        | 264    | 579    | 630   | 79    |
| 13                         | Amritsar ... ..        | 15                       | 2   | 1,039                    | 1   | ...      | ...       | ...    | 6      | 8     | ...   |
| 14                         | Gurdaspur ... ..       | 22                       | 3   | 2,238                    | 11  | 5        | 9         | 26     | 39     | 15    | ...   |
| 15                         | Shaikot ... ..         | 30                       | 7   | 2,349                    | 15  | ...      | 1         | 6      | 101    | 118   | 19    |
| 16                         | Gujranwala ... ..      | 35                       | 12  | 1,733                    | 46  | ...      | 2         | 9      | 116    | 256   | 51    |
| RAWALPINDI DIVISION.       |                        |                          |   |                          |   |          |           |        |        |       |       |
| 17                         | Gujrat ... ..          | 17                       | 6   | 1,326                    | 15  | 3        | ...       | 4      | 10     | 6     | 4     |
| 18                         | Shahpur ... ..         | 23                       | 6   | 1,054                    | 4   | ...      | 5         | 9      | 23     | 11    | 9     |
| 19                         | Jhelum ... ..          | 14                       | 6   | 898                      | 16  | 1        | 13        | 36     | 133    | 185   | 35    |
| 20                         | Rawalpindi ... ..      | 14                       | 6   | 1,177                    | 10  | 3        | 2         | 19     | 18     | 45    | 15    |
| 21                         | Attock ... ..          | 13                       | 3   | 628                      | 18  | ...      | 16        | 94     | 165    | 347   | 212   |
| 22                         | Mianwali ... ..        | 15                       | 1   | 393                      | 2   | 3        | ...       | 1      | ...    | ...   | ...   |
| MULTAN DIVISION.           |                        |                          |   |                          |   |          |           |        |        |       |       |
| 23                         | Montgomery ... ..      | 21                       | 10  | 2,438                    | 22  | 9        | 62        | 56     | 270    | 268   | 167   |
| 24                         | Lyalpur ... ..         | 21                       | 8   | 1,277                    | 28  | 29       | 12        | 32     | 118    | 171   | 18    |
| 25                         | Jhang ... ..           | 13                       | 3   | 955                      | 13  | ...      | 1         | 1      | 3      | 23    | 3     |
| 26                         | Multan ... ..          | 20                       | 8   | 1,353                    | 12  | ...      | ...       | 32     | 49     | 55    | 2     |
| 27                         | Muzaffargarh ... ..    | 23                       | 1   | 860                      | ...   | ...      | ...       | ...    | ...    | ...   | ...   |
| 28                         | Dera Ghazi Khan ... .. | 23                       | 1   | 707                      | ...   | ...      | ...       | ...    | ...    | ...   | ...   |
| Total for the Province ... |                        | 561                      | 157   | 34,193                   | 421   | 129      | 444       | 1,899  | 3,822  | 3,429 | 715   |



## No. XII.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1919.

|       |         |            |          |           |           | 6      |          |        | 7  |          |        | 8   | 9   |
|-------|---------|------------|----------|-----------|-----------|--------|----------|--------|--|----------|--------|---|-----|
|       |         |            |          |           |           | TOTAL. |          |        | RATIO OF DEATHS PER 1,000 OF POPULATION. |          |        | Mean ratio per 1,000 for previous five years. | No. |
| July. | August. | September. | October. | November. | December. | Males. | Females. | Total. | Males.                                   | Females. | Total. |   |     |
| 13    | 14      | 15         | 16       | 17        | 18        | 19     | 20       | 21     | 22                                       | 23       | 24     | 25  | 26  |
| ...   | ...     | ...        | ...      | ...       | ...       | 251    | 221      | 472    | 0.57                                     | 0.60     | 0.59   | 1.92  | 1   |
| ...   | ...     | 5          | 24       | 27        | 6         | 1,550  | 1,679    | 3,228  | 4.02                                     | 5.09     | 4.52   | 1.59  | 2   |
| ...   | ...     | ...        | ...      | ...       | ...       | 44     | 24       | 68     | 0.11                                     | 0.07     | 0.09   | 1.96  | 3   |
| ...   | ...     | ...        | ...      | ...       | ...       | 9      | 6        | 15     | 0.02                                     | 0.02     | 0.02   | 2.05  | 4   |
| ...   | ...     | ...        | ...      | ...       | ...       | 29     | 32       | 61     | 0.08                                     | 0.12     | 0.09   | 4.13  | 5   |
| ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...    | ...                                      | ...      | ...    | ...   | 6   |
| ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...    | ...                                      | ...      | ...    | 0.03  | 7   |
| ...   | ...     | ...        | ...      | ...       | ...       | 44     | 31       | 75     | 0.09                                     | 0.07     | 0.08   | 4.13  | 8   |
| ...   | ...     | 1          | ...      | ...       | ...       | 90     | 60       | 150    | 0.20                                     | 0.17     | 0.19   | 7.65  | 9   |
| ...   | ...     | ...        | ...      | ...       | ...       | 27     | 36       | 63     | 0.09                                     | 0.16     | 0.12   | 10.01   | 10  |
| ...   | ...     | ...        | ...      | ...       | ...       | 574    | 588      | 1,162  | 1.10                                     | 1.43     | 1.24   | 1.63  | 11  |
| ...   | ...     | ...        | 3        | ...       | ...       | 793    | 818      | 1,611  | 1.36                                     | 1.88     | 1.59   | 7.02  | 12  |
| ...   | ...     | ...        | 1        | ...       | ...       | 8      | 7        | 15     | 0.02                                     | 0.02     | 0.02   | 5.61  | 13  |
| ...   | ...     | ...        | ...      | ...       | ...       | 50     | 44       | 94     | 0.11                                     | 0.12     | 0.11   | 6.61  | 14  |
| 1     | ...     | 4          | ...      | ...       | ...       | 120    | 170      | 290    | 0.28                                     | 0.40     | 0.26   | 5.66  | 15  |
| ...   | ...     | ...        | 2        | 3         | 20        | 244    | 215      | 459    | 0.47                                     | 0.53     | 0.50   | 7.89  | 16  |
| ...   | ...     | ...        | 1        | 1         | ...       | 20     | 9        | 29     | 0.05                                     | 0.03     | 0.04   | 9.79  | 17  |
| ...   | ...     | 1          | 1        | ...       | 1         | 23     | 37       | 60     | 0.05                                     | 0.12     | 0.09   | 3.32  | 18  |
| ...   | ...     | ...        | 1        | 9         | 6         | 194    | 126      | 320    | 0.74                                     | 0.98     | 0.83   | 8.65  | 19  |
| 1     | 8       | 40         | 93       | 61        | 12        | 180    | 140      | 320    | 0.67                                     | 0.58     | 0.63   | 8.51  | 20  |
| ...   | ...     | ...        | 2        | 2         | ...       | 335    | 500      | 835    | 1.25                                     | 2.04     | 1.63   | 3.62  | 21  |
| ...   | ...     | ...        | ...      | ...       | ...       | 3      | 1        | 4      | 0.02                                     | 0.01     | 0.01   | 0.03  | 22  |
| 55    | 5       | 1          | ...      | ...       | ...       | 402    | 492      | 894    | 1.45                                     | 2.16     | 1.77   | 1.43  | 23  |
| ...   | 1       | ...        | ...      | ...       | 1         | 173    | 209      | 382    | 0.34                                     | 0.54     | 0.48   | 1.54  | 24  |
| ...   | ...     | ...        | ...      | ...       | 1         | 19     | 12       | 31     | 0.07                                     | 0.05     | 0.06   | 1.33  | 25  |
| ...   | ...     | 16         | 71       | 68        | 71        | 203    | 161      | 364    | 0.47                                     | 0.44     | 0.45   | 0.65  | 26  |
| ...   | ...     | ...        | 1        | ...       | ...       | ...    | 1        | 1      | ...                                      | 0.03     | 0.002  | 0.04  | 27  |
| ...   | ...     | ...        | ...      | 1         | ...       | 1      | ...      | 1      | 0.003                                    | ...      | 0.002  | 0.001   | 28  |
| 55    | 14      | 68         | 200      | 172       | 118       | 5,890  | 5,678    | 11,568 | 0.51                                     | 0.65     | 0.57   | 4.07  |     |



## MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

| Serial No.              | Districts and Native states. | JANUARY. |         | FEBRUARY. |         | MARCH. |         | APRIL. |         | MAY.   |         | JUNE.  |         |
|-------------------------|------------------------------|----------|---------|-----------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
|                         |                              | Cases.   | Deaths. | Cases.    | Deaths. | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. |
| 1                       | 2                            | 3        | 4       | 5         | 6       | 7      | 8       | 9      | 10      | 11     | 12      | 13     | 14      |
| 1                       | Hissar                       | 18       | 17      | 30        | 21      | 115    | 99      | 406    | 208     | 104    | 67      | ...    | ...     |
| 2                       | Rohtak                       | 91       | 57      | 241       | 199     | 1,071  | 847     | 1,542  | 1,212   | 728    | 783     | 14     | 68      |
| 3                       | Gurgaon                      | ...      | ...     | ...       | ...     | 11     | 5       | 47     | 43      | 20     | 20      | ...    | ...     |
| 4                       | Karnal                       | ...      | ...     | ...       | ...     | ...    | ...     | 2      | 2       | 21     | 11      | 1      | 2       |
| 5                       | Ambala                       | ...      | ...     | 20        | 13      | 41     | 29      | 31     | 17      | 2      | 2       | ...    | ...     |
| 6                       | Sirsa                        | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 7                       | Kangra                       | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 8                       | Hoshiarpur                   | ...      | ...     | 7         | 5       | 5      | 4       | 26     | 19      | 52     | 43      | 9      | 4       |
| 9                       | Jullundur                    | ...      | ...     | ...       | ...     | 77     | 34      | 110    | 73      | 36     | 42      | ...    | ...     |
| 10                      | Ludhiana                     | ...      | ...     | ...       | ...     | 84     | 38      | 43     | 25      | 6      | ...     | ...    | ...     |
| 11                      | Ferozepore                   | 1        | 1       | 30        | 28      | 285    | 254     | 552    | 533     | 331    | 320     | 27     | 26      |
| 12                      | Lahore                       | 1        | 1       | 90        | 55      | 321    | 264     | 885    | 579     | 798    | 630     | 57     | 79      |
| 13                      | Amritsar                     | ...      | ...     | ...       | ...     | ...    | ...     | 17     | 6       | 18     | 8       | ...    | ...     |
| 14                      | Gurdaspur                    | 7        | 5       | 12        | 9       | 30     | 26      | 45     | 39      | 20     | 15      | ...    | ...     |
| 15                      | Sialkot                      | ...      | ...     | 1         | 1       | 13     | 6       | 99     | 101     | 178    | 118     | 19     | 19      |
| 16                      | Gujranwala                   | ...      | ...     | 2         | 2       | 19     | 9       | 208    | 116     | 301    | 256     | 64     | 51      |
| 17                      | Gujrat                       | 3        | 3       | ...       | ...     | 5      | 4       | 10     | 10      | 8      | 6       | 4      | 4       |
| 18                      | Shekhpur                     | ...      | ...     | 7         | 5       | 11     | 9       | 32     | 23      | 12     | 11      | 10     | 9       |
| 19                      | Jhelum                       | 1        | 1       | 18        | 13      | 51     | 41      | 164    | 134     | 202    | 185     | 36     | 36      |
| 20                      | Rawalpindi                   | 8        | 3       | 3         | 2       | 28     | 19      | 30     | 18      | 67     | 49      | 23     | 15      |
| 21                      | Attock                       | ...      | ...     | 26        | 16      | 142    | 94      | 226    | 165     | 357    | 347     | 256    | 212     |
| 22                      | Mianwali                     | 2        | 3       | ...       | ...     | 1      | 1       | 3      | ...     | ...    | ...     | ...    | ...     |
| 23                      | Montgomery                   | 50       | 9       | 85        | 62      | 110    | 56      | 511    | 270     | 408    | 168     | 395    | 167     |
| 24                      | Lyallpur                     | 39       | 29      | 24        | 12      | 18     | 32      | 100    | 118     | 226    | 171     | 13     | 18      |
| 25                      | Jhang                        | 5        | ...     | 5         | 1       | 7      | 1       | 8      | 3       | 35     | 23      | 3      | 3       |
| 26                      | Multan                       | ...      | ...     | 4         | ...     | 46     | 32      | 72     | 49      | 82     | 55      | 2      | 2       |
| 27                      | Muzaffargarh                 | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 28                      | Dera Ghazi Khan              | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| Total British Districts |                              | 226      | 129     | 605       | 444     | 2,491  | 1,904   | 5,209  | 3,823   | 3,953  | 3,430   | 953    | 715     |
| 1                       | Patiala                      | 12       | 11      | 31        | 31      | 326    | 316     | 319    | 319     | 111    | 111     | 136    | 136     |
| 2                       | Kapurthala                   | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | 15     | 12      | ...    | ...     |
| 3                       | Maler Kotla                  | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 4                       | Jind                         | 55       | 38      | 87        | 62      | 109    | 69      | 163    | 113     | 48     | 40      | 2      | 3       |
| 5                       | Kaibla                       | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 6                       | Faridkot                     | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 7                       | Nabha                        | ...      | ...     | ...       | ...     | 14     | 14      | 13     | 13      | 22     | 22      | ...    | ...     |
| 8                       | Patandi                      | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 9                       | Bahawalpur                   | 2        | 1       | 7         | 2       | 63     | 30      | 162    | 74      | 14     | 18      | ...    | ...     |
| 10                      | Nagarh                       | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| 11                      | Ellsarpur                    | ...      | ...     | ...       | ...     | ...    | ...     | ...    | ...     | ...    | ...     | ...    | ...     |
| Total Native States     |                              | 70       | 50      | 125       | 95      | 532    | 429     | 657    | 519     | 210    | 203     | 138    | 139     |
| GRAND TOTAL             |                              | 296      | 179     | 730       | 539     | 3,023  | 2,333   | 5,866  | 4,342   | 4,163  | 3,633   | 1,101  | 854     |



## No. I.

## DISTRICTS AND NATIVE STATES IN THE PUNJAB DURING THE YEAR 1919.

| JULY.  |         | AUGUST. |         | SEPTEMBER. |         | OCTOBER. |         | NOVEMBER. |         | DECEMBER. |         | TOTAL. |         | Serial No. | REMARKS. |
|--------|---------|---------|---------|------------|---------|----------|---------|-----------|---------|-----------|---------|--------|---------|------------|----------|
| Cases. | Deaths. | Cases.  | Deaths. | Cases.     | Deaths. | Cases.   | Deaths. | Cases.    | Deaths. | Cases.    | Deaths. | Cases. | Deaths. |            |          |
| 15     | 16      | 17      | 18      | 19         | 20      | 21       | 22      | 23        | 24      | 25        | 26      | 27     | 28      | 29         | 30       |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 673    | 472     | 1          |          |
| ...    | ...     | ...     | ...     | 7          | 5       | 28       | 24      | 43        | 27      | 8         | 6       | 3,773  | 3,228   | 2          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 78     | 68      | 3          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 24     | 15      | 4          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 94     | 61      | 5          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 6          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 7          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 93     | 75      | 8          |          |
| ...    | ...     | ...     | ...     | 1          | 1       | ...      | ...     | ...       | ...     | ...       | ...     | 224    | 150     | 9          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | 1         | ...     | 134    | 63      | 10         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 1,276  | 1,162   | 11         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | 3        | 3       | 1         | ...     | ...       | ...     | 2,136  | 1,611   | 12         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | 1        | 1       | ...       | ...     | ...       | ...     | 86     | 15      | 13         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 114    | 94      | 14         |          |
| 1      | 1       | ...     | ...     | 6          | 4       | ...      | ...     | ...       | ...     | ...       | ...     | 257    | 250     | 15         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | 4        | 2       | 6         | 3       | 22        | 20      | 626    | 459     | 16         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | 2        | 1       | 1         | 1       | ...       | ...     | 33     | 19      | 17         |          |
| ...    | ...     | ...     | ...     | 1          | 1       | 1        | 1       | ...       | ...     | 1         | 1       | 75     | 60      | 18         |          |
| ...    | ...     | ...     | ...     | 1          | ...     | 2        | 1       | 9         | 9       | 7         | 6       | 491    | 426     | 19         |          |
| 1      | 1       | 10      | 8       | 101        | 40      | 214      | 99      | 99        | 68      | 32        | 13      | 616    | 335     | 20         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | 5        | 2       | 2         | 2       | ...       | ...     | 1,014  | 838     | 21         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 6      | 4       | 22         |          |
| 101    | 56      | 26      | 5       | 1          | 1       | ...      | ...     | ...       | ...     | ...       | ...     | 1,687  | 894     | 23         |          |
| ...    | ...     | ...     | 1       | ...        | ...     | ...      | ...     | ...       | ...     | 7         | 1       | 487    | 382     | 24         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | 1         | 1       | 65     | 32      | 25         |          |
| ...    | ...     | 4       | ...     | 35         | 16      | 144      | 71      | 105       | 68      | 122       | 71      | 616    | 364     | 26         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | 1        | 1       | ...       | ...     | ...       | ...     | 1      | 1       | 27         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | 1         | 1       | ...       | ...     | 1      | 1       | 28         |          |
| 103    | 58      | 40      | 14      | 153        | 68      | 405      | 206     | 267       | 179     | 201       | 119     | 14,616 | 11,839  |            |          |
| 69     | 69      | 13      | 13      | ...        | ...     | ...      | ...     | ...       | ...     | 77        | 77      | 1,694  | 1,083   | 1          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 15     | 12      | 2          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 3          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 465    | 325     | 4          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 5          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 6          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 49     | 49      | 7          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 8          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | 268    | 125     | 9          |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 10         |          |
| ...    | ...     | ...     | ...     | ...        | ...     | ...      | ...     | ...       | ...     | ...       | ...     | ...    | ...     | 11         |          |
| 69     | 69      | 13      | 13      | ...        | ...     | ...      | ...     | ...       | ...     | 77        | 77      | 1,891  | 1,594   |            |          |
| 172    | 127     | 53      | 27      | 153        | 68      | 405      | 206     | 267       | 179     | 278       | 196     | 16,567 | 12,683  |            |          |

Rawalpindi 6 and 15 respectively in cantonments.



1016-15

Wellcome Library  
for the History  
and Understanding  
of Medicine