Annual report of the Medical College of Bengal : fifteenth year, session 1849-50 / under the immediate control and superintendence of the Council of Education.

ANNUAL REPORT

OF THE

Medical College of Bengal.

FIFTEENTH YEAR: SESSION 1849-50.

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1850.

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President.

The Hon'ble J. E. D. Bethune, ..	*Fourth Ordinary Member of the Supreme Council.*

Members.

The Hon'ble Sir J. W. Colvile, ..	*Second Puisne Judge, Supreme Court.*
F. J. Halliday, Esq., ...	*Secy. Govt. of India, Home Dept.*
Sir H. M. Elliot, K. C. B., ...	*Secy. Govt. of India, Foreign Dept.*
C. Beadon, Esq., ...	*Secy. to the Board of Customs, Salt and Opium.*
J. Grant, Esq., ...	*Senior Surgeon, Apothecary General.*
J. Forsyth, Esq., ...	*Surgeon, Secy. Medical Board.*
Babu Russomoy Dutt, ...	*Commissioner, Court of Requests.*
,, Prosunno Coomar Tagore,..	*Govt. Vakeel, Sudder Dewanny.*
,, Ramgopaul Ghose, ...	*Merchant.*

Member and Secretary.

F. J. Mouat, M.D., ...	*Assistant Surgeon, Bengal Army.*

COLLEGE COUNCIL.

H. H. Goodeve, M.D., F.R.C.S. (absent on sick leave.)
D. Stewart, M.D.
H. Walker, Esq.
R. O'Shaughnessy, Esq., F.R.C.S.
H. Falconer, M.D., F.R.S.
Allan Webb, Esq.
E. Goodeve, M.B.
Andrew Robertson, Esq.

F. J. Mouat, M.D., F.R.C.S., *Member, Secretary, and Treasurer.*

INSTRUCTIVE ESTABLISHMENT.

English Department.

Professor of Anatomy and Physiology, ...	H. WALKER, ESQ.
Professor of Descriptive and Surgical Anatomy and Curator of the Museum, ...	ALLAN WEBB, ESQ.
Assistant Demonstrator of Anatomy, ...	DWARKANATH BOSE, M.R.C.S.
Professor of Chemistry and Practical Pharmacy,..	A. ROBERTSON, ESQ.
Professor of Botany, ...	DR. FALCONER.
Professor of Medicine, ...	DR. MOUAT.
Professor of Surgery, ...	R. O'SHAUGHNESSY, ESQ.
Officiating Professor of Midwifery, ...	DR. STEWART.
Professor of Materia Medica and Medical Jurisprudence, ...	DR. E. GOODEVE.

MILITARY CLASS.

Superintendent and Lecturer on Anatomy and Surgery,..	PUNDIT MADUSUDEN GUPTA.
Teacher of Medicine and Materia Medica,..	SUB-ASSISTANT SURGEON SIB CHUNDER KURMOKAR.

MALE HOSPITAL.

Officiating Physician, ...	PROFESSOR WEBB.
Surgeon,..	PROFESSOR R. O'SHAUGHNESSY.
House Surgeon and Apothecary,..	MR. G. DALY, G. M. C. B.

FEMALE AND LYING-IN HOSPITAL.

Officiating Physician, ...	PROFESSOR D. STEWART.
Resident Surgeon,..	PROSUNNO COOMAR MITTER.
Goodeve Scholar, ...	DENA NATH DAS.

OUT-DOOR DISPENSARY.

Superintendent,..	MR. G. DALY.

The following is a list of the pupils of the English class at the close of the session.*

Stipendiary students, ...	38
Robertson scholar, ...	1
Free and Ceylon students, ...	49
Subordinate Medical Department, ...	7
Total, ...	95

* At the beginning of the Session the number was 120 ; of these 2 died, 11 left the Institution, and 12 were struck off for irregularity of attendance.

Of the Natives, five are Moohummudans and the remainder Hindus.

Of the latter there are, ...	*Brahmins,* ..	15
	Boidos,..	8
	Coistos,.. ..	24
	Weavers, ...	3
	Barbers,.. ..	4
	Blacksmiths, ..	2
	Koybuttos, ...	3
	Total, ..	59

In the Military class there are 83 pupils* upon the full monthly pay of five rupees, 6 pupils from Assam, and 11 from Arracan, making in all 100; of these, 75 are Moohummudans, 14 are Hindus, and 11 Burmese.

Of the Hindu students there are, ..	*Brahmins,* ..	6
	Chuttries, ...	3
	Coistos,.. ..	3
	Rowany, ...	2
	Total, ..	14

Eighty of the pupils are Natives of the North-Western Provinces, nine of Bengal, nine of Arracan, and two of Rangoon.

The following tabular statement shews the attendance of the pupils of the Medical College, during the session 1849-50.

Class.	Number of Lectures given.	Number of Students attending.	Total present at all the Lectures during the Session.	Ditto absent during the Session.	Daily average. Present.	Daily average. Absent.	Remarks.
Anatomy and Physiology,...	141	73	9,201	1,092	65·25	7·74	The causes of absence were very much the same as in former years: during the latter part of the session there was much sickness, and several were attacked with small-pox.
Descriptive and Surgical Anatomy, ...	100	52	4,323	877	43·23	8·77	
Medicine, ...	90	41	3,390	300	37·66	3·33	
Surgery, ...	92	41	3,465	307	37·66	3·33	
Midwifery, ...	70	22	1,371	103	20·46	1·53	
Chemistry, ...	99	52	4,379	769	44·23	7·76	
Botany, ...	53	61	2,769	464	52·24	8·75	
Materia Medica, ..	90	53	4,693	77	52·14	0·85	
Medical Jurisprudence, (Toxicology.)	45	21	828	117	18·40	2·60	

* This is exclusive of 21 who passed as Native Doctors, upon an emergent requisition, and were sent to the Punjaub during the session.

The daily average attendance of the Military class residing in the College, was .... 108·89.

Statement of the number of bodies brought to the College for dissection and operations during the winter session of 1849-50.

Dissections.

In November, ...	101
„ December, ...	174
„ January, ...	168
„ February, ...	118
„ March, ...	62
Total,.. ..	623

Number of bodies dissected, ...	196½
„ used for operations, ...	109
„ used in the examinations,.. ..	32
„ of which no use was made, in consequence of rapid putrefaction, ...	285½
Total, ...	623

Expenses of the Institution.

The cost of the Establishment from January to December 1849, was	63,626	6	0
The charges of the Ceylon pupils,*	1,301	3	1
Stipends to students,..	4,197	9	2
Chemical Department,..	434	0	9
Museum and Dissecting Departments, ...	1,700	1	3
Medical College ditto,..	3,004	0	10
Book Allowance,..	840	0	0
Total Rupees, ...	75,103	5	1

Opening of Session of 1849-50.

The session of the Medical College for 1849-50 was opened at 5 P. M. on Friday, the 15th of June, in the presence of the Council of Education and a numerous audience, by Mr. R. O'Shaughnessy, the Professor of Surgery, to whom had been assigned the duty of giving the general introductory lecture. The discourse delivered by this gentleman contained a brief epitome of the history of surgery from the earliest ages to the present time, with special remarks upon the contrast afforded in its practice by the ancient and modern Hindus, and the facilities presented in the Medical College for obtaining a complete professional education. Among the prominent points of interest referred to, were the extraordinary success of some of the graduates of the College in the performance of the formidable operation of lithotomy, and the valuable results which had followed the introduction of chloroform into the practice of surgery.

* Paid by the Ceylon Government.

Upon the conclusion of the lecture, the attention of the audience was directed to a portrait of Pundit Madasuden Gupta, painted by Mrs. Belnos, and presented to the College by the President of the Council of Education. It is placed in the large theatre, exactly opposite the lecturer, and was inaugurated by the following address from the Hon. Mr. Bethune:

Mr. Professor and Gentlemen,—Sometime ago, I intimated a wish that I might be allowed to present to this College the portrait of Pundit Madasuden Gupta, and it appeared to me that this day, which marks the beginning of another academic year, would be an appropriate one for its inauguration. I wish to do honour to a man, to whom not only this College, but all Bengal, I think indeed that I hardly exaggerate if I add, to whom all India is deeply indebted. If you will read the inscription which I have placed on the frame of the picture, you will observe that he is styled "The first Hindu Anatomist of British India." That qualification was advisedly introduced; for, it seems that there is no room for doubt, as I have been assured by those who have devoted much learning and research to an examination of the question, and as we have been just now told, in the course of the interesting lecture to which we have been listening, that in an early period of the history of Bengal, the exact date and limits of which it might be difficult to fix with precision, but which was certainly long anterior to the growth of true science among the natives of Europe, the old Hindu physicians both taught and practised dissection of the human body, as furnishing indispensable assistance to the study of the healing art, and knowledge of the structure of the human frame. The medical Shasters are too clear on this point for any question to be made of it. Professor O'Shaughnessy has told you that they contain minute directions for the choice of subjects, and for the management and disposal of them. The horror of touching a dead body, which unaccountably prevailed at a later period, had then no place in their minds. But this time had long passed away, when British supremacy was established here, and we found a very different and more lamentable state of things. Custom, which is stronger than law, had uttered its decree that it is not lawful to touch the dead; and, with the practice of dissection, the science which had formerly existed also disappeared: what fragments of it were still preserved were held together by feeble and precarious analogies, drawn from the bodies of sheep and goats and other inferior animals.

Only fourteen years are gone since this College was established. I listened in this hall last year with no common interest to an account of its first beginning and progress, delivered by a gentleman now present, the only one, I believe, still remaining of the professors who watched over its infant destinies. At the risk of detaining you too long, I cannot refrain from quoting so much of Dr. Goodeve's able address as refers to the subject on which I am endeavouring to fix your attention.

"Many here to-day may probably remember the formation of the College by Lord William Bentinck in 1835. The Institution consisted of an old house in the rear of the Hindoo College, in which two young Assistant-Surgeons, to whom a third was subsequently, and after much difficulty, added, were expected to teach the whole circle of medical science to a class of upwards of fifty students. There was neither library, museum,

hospital, nor philosophical apparatus; and we had to combat national prejudices against the study of anatomy, which were considered so deeply rooted, that the greater part of the community laughed the attempt to scorn as a vain chimera; and our best friends assisted us with a very modified degree of encouragement, uncertain of the propriety of committing themselves to approve what appeared at best but a very doubtful experiment.

"An admirable class of intelligent and well-educated young men was soon collected, many of them of good family and of high caste, and our labours began on the 20th February 1835. We had not long completed the preliminary arrangements for teaching, when attempts were made to commence the new system of anatomical instruction. Parts of the human body were first introduced in illustration of the daily instruction, and replaced the sheep's brains, goat's livers, wooden models, and tin representations, which formerly served the same purpose. It was not, however, until the Institution was removed to its present site, (an event which occurred about six months after our first appointment,) that a regular course of anatomical lectures was delivered, and an opportunity was afforded me to place an entire subject on the lecture table before the assembled class; an event which of course created much interest and some excitement amongst them, but which soon became familiar from daily repetition.

"Very shortly after this, a few courageous pupils, led by the example of one whose conduct on that and many other occasions cannot be too highly appreciated—our respected Pundit Madasuden Gupta—secretly, and in an out-house of the building, ventured, under my superintendence, with their own hands to dissect a body which had been procured for lecture. Gradually their boldness was communicated to others; and, in less than two years from the foundation of the College, *practical anatomy* became as completely a portion of the necessary studies of the Hindu Medical Students as amongst their brethren in Europe and America. The practice of dissection has since advanced so rapidly amongst us, that the magnificent room erected four years since, in which upwards of 500 bodies were dissected and operated upon in the course of last year, has already become too small for our purpose. We have been compelled to construct an adjoining shed for the convenience of the class, now amounting to upwards of 250 youths of all nations, colours, religions and castes, commingling together in this good work as freely and amicably as the more homogeneous frequenters of an European school."

The 10th day of January, 1836, the date which I have affixed to the picture, a day for ever memorable in the annals of Bengal, was the great day, on which Madasuden Gupta rose up superior to the prejudices of his earlier education, and boldly flung open the gates of medical science to his countrymen.

I have had the scene described to me. It had needed some time, some exercise of the persuasive art, before Madasuden could bend up his mind to the attempt; but, having once taken his resolution, he never flinched or swerved from it. At the appointed hour, scalpel in hand, he followed Dr. Goodeve into the godown where the body lay ready. The other students, deeply interested in what was going forward, but strangely agitated with mingled feelings of curiosity and alarm, crowded after them, but durst not enter the building where this fearful deed was to be perpetrated; they clustered round the door; they peeped through the jilmils;

resolved at least to have ocular proof of its accomplishment. And when Madasuden's knife, held with a strong and steady hand, made a long and deep incision in the breast, the lookers-on drew a long gasping breath, like men relieved from the weight of some intolerable suspense.

One of our magnificent English poets, describing the commission of a great crime, has said in his own inimitable language

'Earth felt the wound, and Nature from her seat,
'Sighing through all her works, gave signs of woe,
'That all was lost.'

And surely, if inanimate things could feel sympathy with the heart of man, this was a day on which all the land of Bengal ought to have leaped up, and uttered a loud shout of triumphant joy. For, it was no common tyrant, it was no vulgar usurper, who was then struck down; the despotism which that day received its death-wound was the usurping tyranny of superstitious ignorance. As this scene, which I have endeavoured to bring before you, was thus graphically described to me, the thought sprung instinctively and simultaneously within me that, if it lay in me to avert it, the memory of the man who had done this deed should not soon pass away.

It is possible that you, now revelling in the enjoyment of that intellectual liberty which Madasuden's boldness has procured for you, may be unable, now that you are in the daily habit of frequenting the dissecting room, to understand wholly the difficulty which he had then to overcome. If this should be so, as well it may, this very fact, to an intelligent mind, will only be one proof more of the fullness and completeness of his triumph.

This was his first and greatest, but this was not his only service to this College. From a pupil he became a teacher, and I see near me many gentlemen better qualified than I am to appreciate and acknowledge the services he has rendered in that capacity. I know that I utter their sentiments, when I declare my belief that I do not derogate improperly from the reputation of any man, in saying that, whether I look to the example which he has set by his uniformly good conduct, or to the zeal and industry which he has known how to infuse into his class, there is scarcely one other man to be found, to whom the College owes more for its progressive and continual prosperity.

These were the reasons which made me wish to place the Pundit's portrait in this theatre, which in my thought could receive no better ornament.

But, although these were my first thoughts, there were also other considerations, which gave to them additional strength. Not for himself only, but for your sake too, did I wish to place his portrait on these walls. I wished that, as often as you should enter this hall, you should find in it some palpable evidence that, sooner or later, uncommon merit has a good chance of distinction and reward.

Undoubtedly, the highest and noblest sentiment by which any man can be animated, when rightly and fully apprehended, is a fixed and settled resolution to use his best endeavours to do his duty, in that state of life in which it has pleased God to place him: but, next to this, I know of no stronger incentive to great exertion, than the thought that what we do shall be well spoken of by those around us, and live in the recollection of those who may come after. In the dining hall of the College in which I was educated hang the portraits of some of the great men who were for-

merly educated within its walls. There is Newton; there is Bacon; there are Barrow and Bentley, Cowley and Dryden, with many more; all of Trinity College, Cambridge. It must needs be that, when looking on these portraits of the mighty dead, and remembering that there was once a time, when these men were, like himself, undistinguished students in that very hall, their discoveries, their works, their reputations still to make, it cannot be but that in many a young heart the thought must find utterance,

'What shall I do to be for ever known,
'To make the world that is to come mine own.'

Such thoughts as this I would fain raise in your minds, whenever you look on this picture. There is room for more: or, if this narrow space should be filled up, you need not fear lest the roll of good deeds, by which you may deserve an equal honour, should be filled so full, that nothing is left which after-comers can hope to add to it. Great reputations have been achieved in your profession: the names of Sydenham and Harvey, Hunter and Jenner, are as familiar to an Englishman's tongue as those of Bacon, Locke and Newton. And you have one peculiar privilege: I am not sure that it is not exclusively your own. Conquerors stride to their renown through burning towns and wasted provinces; the successful lawyer, in the exercise of his profession, is proverbially brought in contact with the worst and basest parts of human nature: too often his skill and eloquence are employed to 'make the worse appear the better reason,' and to give rogues an advantage over honest men; even the statesman is sometimes forced to weigh what he believes to be expedient against what he knows to be just.

But it is your godlike privilege, that you cannot become famous, but by being distinguished blessings to your fellow-creatures; and your proudest triumphs are necessarily co-extensive with the extent and greatness of the services which you are enabled to render to the cause of humanity.

Changes in the Establishment.

In November last, Dr. J. Jackson vacated the chair of Medicine, which he had occupied for some years with credit to himself, and advantage to the Institution. The College Council communicated to the Council of Education the high sense entertained by them of Dr. Jackson's zeal, ability, and efficiency as a teacher, and of their regret at losing the services of so esteemed a colleague.

Dr. Mouat was appointed to succeed Dr. Jackson as Professor of Medicine and Clinical Medicine, and Dr. Edward Goodeve was nominated to the chairs of Materia Medica and Medical Jurisprudence, in succession to Dr. Mouat.

In consequence of the transfer of all the Government Schools and Colleges to the Council of Education in October, and the great increase of work which that measure threw upon him, as Secretary to the Council, Dr. Mouat intimated his inability at that time to command the leisure necessary to enter upon a new sphere of duty, requiring much reading and research, and expressed a desire to place the chair

of Medicine again at the disposal of Government. Professor Webb then intimated his readiness to enter at once upon the proposed duty, and solicited permission to hold it, even for six months, to enable him to complete his work on Indian Pathology. This request was sanctioned: Mr. Webb was appointed to conduct the duties of the chair of Medicine until the opening of the next session, Dr. Edward Goodeve was placed in charge of the office of Professor of Descriptive and Surgical Anatomy, and Dr. Mouat was directed to deliver the course of lectures on Medical Jurisprudence then about to commence.

The permanent arrangements will take effect from the 15th of June 1850.

In January last, Dr. H. H. Goodeve obtained leave of absence for two years on medical certificate, and Dr. Duncan Stewart was appointed to officiate as Professor of Midwifery.

In December 1849, Dr. Gopal Chunder Seal was placed at the disposal of the Board of Administration for the Punjaub, and Sub-assistant Prosuno Coomar Mittre, who formerly held the office, was appointed to succeed him as Resident Surgeon of the Female and Lying-in Hospital.

Proposed comparison of the proficiency of the Pupils of the Medical Schools of Bengal, Madras and Bombay.

In April last, the Honorable President of the Council of Education suggested that it would be desirable to profit by Dr. Mouat's visit to Madras to attempt to institute a comparison of the proficiency of the medical students at the two Presidencies, by tests to be agreed on by him in conference with the medical authorities at Madras, subject to the approval of the Council. Mr. Bethune, at the same time, intimated his readiness to give two medals to be so competed for; a gold medal to the most proficient student of the two Presidencies, and a silver medal to the best student of the unsuccessful Presidency.

The Council requested Dr. Mouat to endeavour to induce the medical authorities of Madras to concur in the proposed competition.

Upon his return from Madras, Dr. Mouat reported that he had visited the Madras Medical School, which he found in a much higher state of organization and efficiency than when he reported upon it in 1845; that he had mentioned the proposal of the Honorable President to Professor Key and to the Honorable D. Eliott, and that it had been favorably received, although no plan of carrying it into effect had then been determined on.

The proposal of entering into the competition has been communicated to Dr. Morehead, the head of the Grant Medical College at Bombay, who also entertained it favorably, and stated his belief that the Institution over which he presided would shortly be prepared for it.

Medical College Hospital.

The New Hospital is now rapidly advancing in construction. The many difficulties, connected with the purchase of the additional ground required, have at last been overcome, and no obstacles now remain to impede the progress of the building toward completion.

In excavating the ground for the foundation, the greater part of the western end was found to be the site of an old tank, from which a large quantity of loose rubbish had to be removed. In addition to this, the ground itself was so soft and yielding as to render piling, with a great amount of extra masonry, necessary.

The estimates for the extra work were carefully examined and checked by Capt. Fraser, and the necessity for strengthening the foundation was pointed out by that officer.

This has caused a very heavy additional outlay, of which a detailed account will be submitted hereafter.

The legacy left by the late Mr. Mearing, was paid by his Executor Mr. Morris in December 1849, after the execution of a deed of release by the Council of Education, of which the expenses were deducted from the bequest.

The amount of the legacy was 2,000 Rupees in Government Sicca five per cent. paper. The bill of costs of Messrs. Frith, Sandes and Watts amounted to eighty-three Rupees. Mr. Morris paid over to the Council of Education one thousand nine hundred and seventeen Company's Rupees, (Co.'s Rs. 1,917) which the Council agreed to accept as the balance of the bequest.

The progress of the building is carefully superintended by Capt. Fraser, to whom the Council of Education are much indebted for the very great care and attention which he bestows upon this work.

Midwifery Hospital.

In November 1849, Dr. H. H. Goodeve submitted the following report upon the state and prospects of the Midwifery Hospital:

"Before finally relinquishing, by my approaching departure from India, my present charge of the Midwifery department of the College, I am desirous of placing it, as far as possible, in a state of efficiency, and I am thus

induced once more to request that you will address the Council of Education upon the subject of the Lying-in Hospital, which forms so important a part of the Obstetric branch of instruction, and to appeal to them again for assistance in its support.

"I am happy to report that in many respects this Hospital is in a very satisfactory condition. The number of patients has continued to increase during the past year,* in yet larger proportion than formerly, and I have no doubt, if properly managed and supported, the already established utility of this Institution will rapidly advance in importance. I attribute much of this improvement to the increasing confidence of the community in the advantages it offers, though I am at the same time convinced that it will take many years of care and fostering to establish our Lying-in Ward upon an equally firm basis with most of the other departments of the College. The native prejudices upon the subject of female treatment and the management of parturient women are yet very strong and deeply rooted.

"Amidst all these advantages and encouraging prospects however, the deficiency of funds forms a serious drawback to our prosperity. This want is now becoming so urgent that, unless some further pecuniary aid is obtained for the Institution, not only must all prospect of extending its utility be abandoned, but its present opportunites for relieving the number of patients who resort to it must be diminished, and consequently the invaluable instruction it affords to students must be curtailed even at present. Besides the Christian patients sent to us by the Police and paid for separately by the latter, I am compelled to limit the admissions to pregnant women, to children, and to a few selected cases affected with such peculiar female complaints as will prove instructive to the pupils. But, if the candidates for our Lying-in Ward continue to increase for a short time in the same ratio that they have latterly done, these admissions must be still further restricted.

"Up to this period we have been able to meet the requisite expenses, by drawing upon the Fund of 500 rupees presented to us last year by a benevolent lady, through Dr. Stewart; but this accidental supply is now exhausted, and I have been obliged to contribute from my own resources to the necessities of the Hospital for the last two months, to obviate its falling into debt.

"I need not, I trust, assure the Council of Education that I endeavour to practise all possible economy, consistent with the objects of the Institution, controlling as far as I can every expense connected with it, and I find my subordinates well disposed to aid my wishes in this matter; but, it must be remembered that the inmates of this Hospital are very peculiarly placed, and for the most part differ materially from the general class of patients in other institutions for the sick in this country. Hence they require a larger establishment, European and Native, and a more ample supply of clothes, sheets, bandages, cloth, &c., and greater attention to the food and general comfort of the patients than are needed in Hospitals for any other description of people. Moreover, to encourage women to resort to the Institution for delivery, it is necessary (for the present at least) to hold out many little advantages to them, in the shape of clothes for themselves and their children when they depart, allowance for tobacco, and such like indulgences not supplied by the Hospital dietary, and fre-

* There are at this moment 20 women awaiting their delivery in the wards, and I expect others daily.

quently to permit them to enter the wards many weeks before they are confined, thereby entailing greater cost upon the Institution than may be strictly necessary for each individual case if rigidly examined.

"It is manifest that all these charges materially, and, I believe, unavoidably, render our expenses comparatively large; and it becomes impossible to meet the requisite outlay with the very limited allowance of 250 rupees per month, which we receive. In proof of the insufficiency and smallness of the sum, in comparison with what is considered necessary in other institutions of the kind in India, I may state that, in the Madras Lying-in Hospital, the salary allowed to the matron alone is nearly as much as we receive for our whole outlay.

"Under these circumstances, I trust that the Council of Education will not consider me importunate, in again asking them to recommend some increase to be made by the Government to our finances; and I would respectfully suggest that a sum of not less than 50 rupees per month be added to the present allowance.—This sum will relieve the Hospital from all immediate difficulties, and will amply suffice till the number of patients materially increase; or it might be desirable perhaps to place it, as far as possible, in respect to allowance, upon the same footing as the Madras Hospital above referred to, taking that Institution for our guide."

Before submitting this statement for the information and orders of Government, the Council have applied to Surgeon W. B. Thompson, the officer in charge of the Lying-in Hospital at Madras, for particulars regarding the expense of maintaining that Institution, which is connected with the Madras Medical School, and appears, in some respects, to be more completely organized than the corresponding department of the Medical College in Calcutta.

In the Madras Hospital, one hundred and sixteen obstetric patients were admitted in 1847, and one hundred and sixty-two in 1848; of the former, eighty-seven were natives, and of the latter, one hundred and thirty-one. A very interesting report of the Hospital, for the two years abovementioned, was forwarded by the Government of India to the Council, who suggested its publication in the records of the school of medicine at Fort St. George, both as exhibiting the usefulness and efficiency of one important department of that Institution, and as affording valuable information upon a branch of medicine, little cultivated among the natives of India, and one connected with which the strongest prejudices still exist.

Out-Door Dispensary.

Mr. Daly, House Surgeon, in charge of the Out-Door Dispensary, reports that the attendance of the Military class, employed during the year as compounders, clinical clerks, and dressers, has been very satisfactory. Thirty-seven of the senior students have served in each department for periods averaging from four to six months, exclusive of their Hospital

duties. Of this number twenty-one were reported qualified and passed into the public service to meet an emergent requisition for Native Doctors in November last, and sixteen are now sent up for final examination, having completed the prescribed period of study at the College. The general good conduct of the class throughout the year was praiseworthy, and the zeal, assiduity, and general proficiency of many of the students deserving of the highest commendation.

Library. The following is a general return of the library of the Medical College during the year 1849:

Number of Volumes in the Library on the 1st January 1849,.....		4,856
Added during the year, ...		
of these 177 Volumes were presented,	... ...	359
and 182 ditto were purchased.		
359	Total,...	5,215
Destroyed to such extent as to be unfitted for the purpose of study or reference, ...		90
Number of Works in store on the 31st December 1849, ...		1,320
Number of Volumes in store, ditto, ...		5,125

SUBJECTS OF THE WORKS.

Anatomy and Physiology,...	755
Surgery, ...	500
Medicine, ...	1,426
Chemistry, ...	250
Materia Medica,...	1,098
Medical Jurisprudence,...	69
Botany, ...	196
Midwifery, ...	81
Miscellaneous, ...	840
Total,...	5,215

Conduct of Students, English Class. The general conduct of the students of the English class during the session was satisfactory: their conduct in the classes of the various Professors is recorded in the special reports of those gentlemen.

Hindustani Class. The conduct of the Hindustani class has not been so exemplary as in former years. In June last, the greater part of the class mutinied, refused to perform their duties until their imaginary grievances were redressed, and took oaths to disobey all autho-

rity, unless their improper and unreasonable requests were complied with.

The matter was immediately and carefully investigated, when it was ascertained that a few bad characters headed the revolt, and that most of the others were compelled by threats of personal violence to join in it. The seven ringleaders were expelled, and all who took part in the disturbance punished. Since that time the conduct of the class has been, in every way, exemplary.

The conduct of the Staff Serjeant, in charge of the class, was strongly disapproved by the Council, and he was warned that any future hesitation in the discharge of his duty would render him liable to immediate dismissal.

Student Apprentices.

The conduct of the student apprentices during the past session in the lecture rooms and Hospital was generally satisfactory; but their behaviour in quarters was not quite so exemplary. Instigated by bad example, they preferred in a body charges of misconduct against the Staff Sergeant under whose control they are placed.

When these were investigated, they were found to be a tissue of gross exaggerations and fabrications; and, as two of the apprentices conducted themselves with extreme insubordination and impropriety, they were recommended for removal. Since that time, the conduct of the remainder, in all places and at all times, has been exemplary.

Reports of the Professors.

The following are the special reports submitted by the Professors regarding their classes during the past session. The Council of Education consider them to be generally satisfactory:

Anatomy and Physiology.

The Professor of Anatomy and Physiology reports that the conduct of the students in the class of Anatomy and Physiology, and in the dissecting class, has been satisfactory.

The supply of subjects has been more abundant than in any former year, chiefly owing to the able management of Pundit Madusuden Gupta, lecturer on Anatomy to the Hindustani class.

Dissections have been carried on by the Hindustani class with assiduity.

Their acquirements in Anatomy, as shewn at the final examinations, were more than equal to any duties which they may be called on to perform.

Descriptive and Surgical Anatomy, English Class.

The Officiating Professor of Descriptive and Surgical Anatomy reports that he assumed charge of the duties of Professor of Descriptive and Surgical Anatomy on the 28th November 1849, and that he delivered forty-two lectures, which, with those previously given by Professor

Webb, completed the course of 100 lectures required by the regulations of the College for the class of Descriptive and Surgical Anatomy. He was quite satisfied with the assiduity and good conduct of the pupils of his class during the time of their attendance on his lectures.

Hindustani Class.

Assistant Surgeon Edward Goodeve reports that he afforded instruction to the pupils of the Military class in minor surgery and in the duties required of them as assistants in the greater operations of surgery. He was much pleased with the conduct, attention, and desire for improvement manifested by these pupils. He observed that many of the senior pupils were expert in the application of bandages and in other minor operations, before receiving any instruction from him.

Botany.

The attendance and conduct of the Botanical class, during the past session, and the progress made by the pupils, have been satisfactory.

The conveyance allowance having been made available, the second and third year students visited the Botanical Garden weekly with manifest advantage.

Chemistry.

Mr. Robertson reports that eighty-eight lectures had been delivered to the Chemical class during the past session ; that every thing regarding these, the attendance and proficiency of the students, had gone on as usual in as former sessions, and that nothing occurring in the course of the lectures seemed to call for a more detailed notice.

Materia Medica, English Class.

The Professor of Materia Medica reports that his course consisted of eighty-five lectures, and embraced the same subjects as in former years, with the exception of the detailed consideration of the therapeutical actions of drugs, and their employment in the treatment of diseases.

The conduct of the pupils in the class room was satisfactory, and the information, exhibited by the students in the junior diploma examination, as great as could be expected from attendance for one session only, on so extended and complicated a branch of medicine.

Materia Medica, Hindustani Class.

In regard to the Hindustani class, the Professor of Materia Medica expressed his satisfaction with the manner in which they had been taught, and with their proficiency in the general and diploma examinations conducted by him.

Medical Jurisprudence.

The Professor of Medical Jurisprudence reported that the course of Toxicology, to which the past winter session was entirely devoted, consisted of forty-five lectures, of which every fourth on Saturdays was devoted to the practical testing of such poisonous agents as are capable of being detected by chemical analysis.

The attendance of a few of the students on these lectures was very irregular. The conduct and assiduity of the remainder was in every way satisfactory.

Medicine, English Class.

The Officiating Professor of Medicine reports that he is quite satisfied with the attention of his class at clinical lectures and the clinical practice of the Hospital.

Since the male hospital was closed for repairs, and clinical lectures became impracticable, a series of systematic examinations on the pathological preparations in the museum had been given by the Officiating Professor of Medicine twice a week.

The opportunities thus afforded, in addition to the general examinations, have led Professor Webb to form a high opinion of the general attainments of the English class as most creditable to them.

Hindustani Class. The Hindustani class were found greatly deficient generally in their knowledge of medicine.

Surgery, English Class. The Professor of Surgery reports favorably of the conduct and progress of his class. The students were very regular in their attendance upon the lectures, and, up to the closing of the male hospital for repairs, they were most attentive to their clinical studies.

Hindustani Class. Eleven out of the sixteen students who presented themselves for final examination passed very creditably. Five were rejected as unqualified in surgery. The working and efficiency of this class is not to be judged of, however, by the result of this examination; but by the number of really able and most useful hospital assistants which it placed at the disposal of Government during the year, for service with the different regiments throughout the country.

Midwifery. The Officiating Professor of Midwifery states his high satisfaction with the attainments of the pupils, both final and general.

They evidently understood all that they had learned, and were accustomed to think correctly, before giving hasty answers. The result of the honor examination was in every sense creditable.

Diploma Examination, English Class. The diploma examination of the English class was conducted by Surgeon J. Forsyth, the Government Examiner, assisted by the following gentlemen as assessors:

Senior Surgeon J. Grant, Apothecary General.

Senior Surgeon W. Montgomerie, M. D., Garrison Surgeon, Fort William.

Surgeon A. Chalmers, M. D.,
Surgeon H. Chapman,
Surgeon J. T. Pearson,
} Presidency Surgeons.

Assistant Surgeon F. P. Strong, Civil Surgeon, 24-Pergunnahs.

In Appendix C. Nos. 1 and 2 are Tabular statements of the candidates who presented themselves for diplomas, with the result of their examinations. All were passed, viz:

1 J. Kearney.
2 Bukshi Ram.
3 J. J. Durant.
4 C. Raddock.

5	J. W. Brechman, } Ceylon	8	Bholanath Doss.
6	J. W. Marganout, } students.	9	Sreenath Mookerjee, 2nd.
7	Sreenath Mookerjee, 1st.	10	Madhub Lall Shome.

The Gold Medal for general proficiency was awarded to Mr. Kearney.

The following extract, from the Government Examiner's report, is published for general information:—

"I have only further to remark that, although it appeared to the assessors and to myself that some of the native students shewed somewhat less than the usual facility, in expressing themselves in the English language, yet this was less remarkable in their written theses than in their oral examinations; and, on the whole, they all displayed a very satisfactory practical acquaintance with the several branches on which we had occasion to test them.

"I beg leave to add that Mr. Kearney appears to be the most intelligent and deserving candidate of the season; and, although there were some inaccuracies in his written papers, it is but fair to attribute them to the haste with which, owing to the shortness of the time allowed, he was compelled to finish them; as in incidentally recurring to the subject in the course of his oral examination, his answers were more satisfactory."

Supply of Native Doctors for the Punjaub.

In November last, upon an emergent requisition from the Medical Board, the senior students of the Military class were examined, and the following declared qualified for employment as Native Doctors:

1	Prem Chand.	11	Shaik Mahomed Buksh.
2	Bhowanee Deen Tewary.	12	Shaik Kymoodeen.
3	Mudary Sing.	13	Meer Hyder Allee.
4	Uhmud Yar Khan.	14	Shaik Ubdool Wahub.
5	Kadur Buksh Khan.	15	Sewrakhun Dobay.
6	Mirza Hingun.	16	Shaik Fukrooddeen.
7	Shaik Usgur Alli.	17	Sobhan Khan.
8	Nubee Buksh.	18	Shaik Fyzoollah.
9	Choonee Loll.	19	Shaik Golam Gouse.
10	Meer Dedar Buksh.	20	Umeer Hossain.

21 Shaik Wuzeer Alli.

The Gold Medal for general proficiency in the class was awarded to Prem Chand, and all were placed at the disposal of the Board of Administration, for employment in the Punjaub.

Further supply of Native Doctors.

At the end of the session in March, a second examination for the diploma of Native Doctor was held, when the

following students passed, and were placed at the disposal of Government:

22 Shaikh Subratee.
23 Shaikh Alli Buksh.
24 Shaik Nooruddin.
25 Shaik Junglee.
26 Shaik Suffer Alli.
27 Hormuth Khan.
28 Nezamoodeen, } Assamese.
29 Gungapershaud, } Assamese.
30 Shaik Rujub Alli, } Assamese.
31 Ahmud Khan, 1st.
32 Sadoolla Khan.
33 Ahmud Khan, 2nd.
34 Nuwaub Khan.

Junior Diploma Examinations.

During the past session the new regulations of the College, regarding examinations, were acted upon for the first time; the first pass or diploma examinations were conducted by the Professors of Anatomy and Physiology, Descriptive and Surgical Anatomy, Botany, Chemistry, and Materia Medica. Certificates of qualification in those subjects were awarded to the following students:

5th year Students.

1 Sreenath Mookerjee, 1st,
2 Bholanath Doss.
3 Sreenath Mookerjee, 2nd.
4 Bukshi Ram.
5 Madhub Lall Shome.
6 J. Kearney.
7 J. W. Brechman.
8 J. W. Marganout.
9 J. J. Durant.
10 C. Raddock.

4th year Students.

11 Deno Nath Das,
12 Mahomed Jaun,
13 J. Hinder.

3rd year Students.

14 Abdool Humeed, 2nd,
15 Bindabun Chunder Chatterjee.
16 Umbika Churn Chatterjee.
17 Chunder Coomar Deb.
18 Brijonath Bundoo.
19 G. H. Daly.
20 Mittoonjoy Bose.

2nd year Students.

21 Jogendronarain Sen.
22 Nilmadhub Mookerjee.
23 Khitter Chunder Nundy.
24 J. Foy.
25 Unnodapersaud Naug.

The detailed tabular results of the examinations referred to are contained in Appendix C. to this report.

Appendix.

The appendix contains, as usual, the hospital and dispensary returns of the past year, the official report on the students who have left the College, the various examination questions, with the answers of the most proficient students, a prize roll, and tabular statements of the results of all the examinations held. The answers of the students are printed without any correction of errors, either of grammar or of fact, contained in them.

Buildings.

The whole of the College is at present under repair, in consequence of which the Male Hospital has been closed for the last two months. The female patients were transferred to the male wards, during the repair of the building occupied by the former, as there was no other institution of similar character in Calcutta, in which they could be placed.

The Museum has been transferred to the building formerly occupied by the Ceylon students. The quarters occupied by the Hindustani class have been specially inspected by the Military Board, with a view to increase considerably the accommodation of the students, and the general improvement of the ventilation of the building.

(By Order)

FRED. J. MOUAT, M. D.,
Secretary.

Council of Education,
April 15th, 1850.

APPENDIXES.

Appendix A. No. I.

Annual Return of Diseases treated in the Medical College, Male and Female Hospitals, from the 1st January to 31st December, 1849.

Number.	Diseases.	Remaining.	Admitted.	Total.	Discharged cured.	Died.	Remaining.	Remarks.
1	Zymotic Diseases, ...	41	1130	1171	1017	143	11	
	Sporadic Diseases—							
2	Of uncertain and variable seat, ..	3	165	168	164	3	1	
3	Of the Nervous System, ...	2	142	144	124	20	0	
4	Of the Respiratory Organs, ...	5	79	84	69	13	2	
5	Of the Organs of Circulation, ...	0	2	2	0	2	0	
6	Of the Digestive Organs, ...	7	124	131	117	14	0	
7	Of the Urinary Organs, ...	0	25	25	23	2	0	
8	Of the Organs of Generation, ..	7	81	88	76	1	11	
9	Of the Organs of Locomotion, ...	10	111	121	120	0	1	
10	Of the Integumentary System, ..	12	151	163	163	0	0	
11	External causes, Poisoning, Asphyxia, Injuries, &c., ...	18	315	333	311	18	4	
	1.							
1	Measles, ...	0	0	0	0	0	0	
2	Diarrhœa, ...	0	5	5	5	0	0	
3	Dysentery, ...	10	187	197	151	44	2	
4	Cholera, ...	0	212	212	131	81	0	
5	Ague, ...	4	60	64	64	0	0	

Number.	Diseases.	Remaining.	Admitted.	Total.	Discharged. cured.	Died.	Remaining.	Remarks.
6	Remittent Fever, ...	16	424	440	418	18	4	
7	Common continued Fever, ...	6	134	140	140	0	0	
8	Erysipelas, ...	0	9	9	9	0	0	
9	Syphilis, ...	5	89	94	89	0	5	
	2.							
10	Inflammation, ...	0	28	28	28	0	0	
11	Hemorrhage, ...	0	6	6	6	0	0	
12	Dropsy, ...	2	49	51	51	0	0	
13	Abscess, ...	0	32	32	32	0	0	
14	Mortification, ...	0	7	7	5	2	0	
15	Purpura, ...	0	28	28	28	0	0	Mostly all cases of Sea Scurvy.
16	Scrofula, ...	0	5	5	4	0	1	
17	Carcinoma, ...	0	1	1	1	0	0	
18	Tumours, ...	1	9	10	9	1	0	
	3.							
19	Apoplexia, ...	0	6	6	0	6	0	
20	Paralysis, ...	0	7	7	7	0	0	
21	Convulsions, ...	0	7	7	4	3	0	All cases of Tetanus, { Idiopathic 4. Fatal 2. Tranmatic 3. Fatal 1.
22	Epilepsia, ...	0	14	14	14	0	0	
23	Insanity, ...	0	1	1	1	0	0	
24	Delirium Tremens, ...	2	97	99	88	11	0	
25	Brain, &c. Diseases of	0	10	10	10	0	0	

	4.							
26	Bronchitis, ...	5	36	41	39	0	2	
27	Pleurisy, ...	0	19	19	19	0	0	
28	Pneumonia, ...	0	4	4	3	1	0	
29	Asthma, ...	0	8	8	8	0	0	
30	Phthisis, ...	0	12	12	0	12	0	Principally Native Portuguese Christians.
	5.							
31	Aneurism, ...	0	2	2	0	2	0	Of the Aorta.
32	Heart, &c. Diseases of	0	0	0	0	0	0	
	6.							
33	Enteritis, ...	0	6	6	6	0	0	
34	Peritonitis, ...	0	4	4	4	0	0	
35	Tabes Mesenterica, ...	0	0	0	0	0	0	
36	Ascites, ...	0	19	19	16	3	0	
37	Hernia, ...	0	3	3	3	0	0	
38	Colic or Ileus, ...	0	8	8	8	0	0	
39	Hœmatemesis, ...	0	2	2	2	0	0	
40	Hepatitis, ...	3	37	40	31	9	0	
41	Jaundice, ...	0	21	21	21	0	0	
42	Spleen, Diseases of	4	24	28	26	2	0	
	7.							
43	Diabetes, ...	0	2	2	2	0	0	
44	Stone, ...	0	13	13	11	2	0	
45	Stricture, ...	0	10	10	10	0	0	
	8.							
46	Childbirth, ...	7	65	72	62	1	9	
47	Uterus, &c. Diseases of	0	16	16	14	0	2	

Number.	Diseases.	Remaining.	Admitted.	Total.	Discharged cured.	Died.	Remaining.	Remarks.
	9.							
48	Rheumatism, ...	10	111	121	120	0	1	
	10.							
49	Carbuncle, ...	0	4	4	4	0	0	
50	Ulcers, ...	12	114	126	126	0	0	
51	Fistula, ...	0	20	20	20	0	0	
52	Skin, &c. Diseases of	0	13	13	13	0	0	
	11.							
53	Violent Deaths, ...	0	0	0	0	0	0	
54	Causes not specified, ...	0	0	0	0	0	0	
55	Wounds, &c., Accidents, ...	10	228	238	227	9	2	
56	Fractures, ...	8	77	85	77	6	2	
57	Poisoning, ...	0	10	10	7	3	0	By Arsenic, ... 2. Fatal 2. ,, Nux Vomica, 2 ,, Opium, .. 4. Fatal 1. ,, Datura, .. 2
	Total, ..	105	2325	2430	2184	216	30	

Medical College, 20th March, 1850.

Fred. J. Mouat, M. D.,
Secretary, Medical College.

No. II.

Table of Admissions and Deaths in the Medical College Hospital, for the year 1849.

Months.	European.						Remarks.	Natives.						Remarks.
	Admitted.		Discharged.		Died.			Admitted.		Discharged.		Died.		
	Medical Cases.	Surgical Cases.	Medical Cases.	Surgical Cases.	Medical Cases.	Surgical Cases.		Medical Cases.	Surgical Cases.	Medical Cases.	Surgical Cases.	Medical Cases.	Surgical Cases.	
January 1849, ...	70	19	63	22	5	0	Of the Deaths among	66	35	65	25	2	1	Of the Deaths among
February „	73	21	62	21	6	0	Europeans—	64	37	64	33	6	0	Natives—
March „	75	24	65	26	9	0	68 were from 1 to 2	73	34	70	32	7	0	27 were from 1 to 2
April „	67	22	68	25	12	0	days in Hospital.	66	28	68	34	4	2	days in Hospital.
May „	73	18	60	22	24	0	24 were from 2 to 7	71	26	65	33	5	3	12 were from 2 to 7
June „	76	24	57	25	15	0	days in Hospital.	74	33	66	30	5	1	days in Hospital.
July „	73	26	62	21	12	0	43 were from 7 to 14	68	32	65	31	5	1	14 were from 7 to 14
August „	70	25	64	22	19	0	days in Hospital.	65	35	72	32	7	3	days in Hospital.
September „	68	19	65	24	10	1	9 were from 14 to 20	72	28	64	25	1	3	10 were from 14 to 20
October „	65	21	66	22	14	2	days in Hospital.	67	34	69	34	4	2	days in Hospital.
November „	72	22	63	20	10	1	2 were from 20 to 40	71	35	63	26	3	0	7 were from 20 to 40
December „	66	27	60	23	6	0	days in Hospital.	62	33	60	30	4	1	days in Hospital.
Total, ...	848	268	755	273	142	4	Total, ...	819	390	791	365	53	17	

Medical College, 20th March, 1850.

Fred. J. Mouat, M. D., *Secretary.*

No. III.

Return of Surgical Operations performed by Professor R. O'Shaughnessy in the Medical College Hospital, during the year 1849.

Nature of Operations.	Number.	Result. Died.	Result. Cured.	Remarks.
Amputation of the shoulder joint, ...	1	1	0	A severe compound fracture of the arm, occasioned by a fall from the top of a house ; the patient, an enfeebled old man, sank rapidly under the effects of mortification of the limb.
„ „ arm, ...	7	1	6	A severe lacerated wound of the arm from the bite of a horse ; the patient died from irritative fever and sloughing stump.
„ „ leg, ...	4	1	3	Severe injury of the knee-joint followed by extensive sloughing of the cellular tissue ; the patient sunk under the effects of irritative fever and diarrhœa.
„ „ foot, ...	2	0	2	
Lithotomy, ...	10	2	8	The deaths occurred in old subjects, from extensive disease of the kidneys.
Operation for strangulated hernia, ...	2	0	2	
Excision of large encysted tumors from the head, ...	2	0	2	
„ from the neck, ...	3	1	2	The fatal case occurred in an old emaciated subject enfeebled by long previous disease.
„ from the shoulder, ...	2	0	2	
„ from various other parts of the body,	4	0	4	
„ cancerous tumors of the eye, ...	0	0	0	
„ of the breast, ...	1	0	1	

Nature of Operation.	Number.	Result. Died.	Result. Cured.	Remarks.
Excision of cancerous tumors of the lip, ...	1	0	1	
„ hypertrophied scrotum, ...	0	0	0	
Operation for necrosis of the tibia and humerus, ...	4	0	4	
„ of the lower jaw, ...	1	0	1	
„ for the removal of a large polypous tumor from the eye,	1	0	1	
„ from the nose	5	0	5	
Operations for cataract, ...	70	0	70	
„ for fistula lachrymalis, ...	4	0	4	
„ for harelip, ...	2	0	2	
„ for fistula in ano, ...	7	0	7	
„ for fistula in perineo, ...	9	0	9	
„ for hydrocele, ...	36	0	36	
„ for phymosis, ...	24	0	24	
Luxations of the shoulder-joint reduced, ...	9	0	9	
„ of the hip-joint ditto, ...	5	0	5	
„ of the clavicle ditto, ...	1	0	1	
Minor operations, ...	80	0	80	
Fractures set up, ...	77	6	71	The deaths were chiefly accidents on board of ships, and falls from the tops of houses.
Total, ...	374	12	362	

Medical College, 20th March, 1850.

FRED. J. MOUAT, M. D., *Secretary.*

No. IV.

Annual Return of Diseases treated in the Out-Door Dispensary of the Medical College, from January to December 1849.

Numbers.	Diseases.	Remained.	Admitted.	Total.	Discharged cured.	Relieved.	Absconded.	Died.	Remaining.	Remarks.
1	Zymotic Diseases, ...	31	6127	6158	5706	420	0	0	32	
2	Of uncertain or variable seat, ...	30	2788	2818	2758	43	0	0	17	
3	Of the Nervous System, ...	0	98	98	0	84	13	0	1	
4	Of the Respiratory Organs, ...	6	958	964	905	56	0	0	3	
5	Of the Digestive Organs, ...	14	1432	1446	1099	334	2	0	11	
6	Of the Urinary Organs, ...	0	31	31	0	31	0	0	0	
7	Of the Organs of Generation, ...	0	146	146	146	0	0	0	0	
8	Of the Organs of Locomotion, ...	12	1825	1837	1824	0	0	0	13	
9	Of the Integumentary System, ...	16	2551	2567	2174	230	150	0	13	
10	External causes, Poisoning, Asphyxia, Injuries, &c., ...	12	1665	1677	1667	0	0	0	10	
	1.									
1	Diarrhœa, ...	0	276	276	276	0	0	0	0	
2	Dysentery, ...	7	811	818	394	420	0	0	4	
3	Ague, ...	5	695	700	693	0	0	0	7	
4	Remittent Fever, ...	3	700	703	699	0	0	0	4	
5	Common continued Fever, ...	7	1875	1882	1874	0	0	0	8	
6	Erysipelas, ...	0	25	25	25	0	0	0	0	
7	Syphilis, ...	9	1745	1754	1745	0	0	0	9	

Numbers.	Diseases.	Remained.	Admitted.	Total.	Discharged cured.	Relieved.	Absconded.	Died.	Remaining.	Remarks.
	2.									
8	Inflammation, ...	15	747	762	755	0	0	0	7	
9	Dropsy, ...	8	921	929	922	0	0	0	7	Chiefly Hydrocele.
10	Abscess, ...	5	873	878	875	0	0	0	3	
11	Mortification, ...	0	44	44	44	0	0	0	0	
12	Scrofula, ...	2	41	43	0	43	0	0	0	
13	Tumors, ...	0	162	162	162	0	0	0	0	
	3.									
14	Paralysis, ...	0	34	34	0	33	0	0	1	
15	Epilepsy, ...	0	35	35	0	35	0	0	0	
16	Insanity, ...	0	29	29	0	16	13	0	0	
	4.									
17	Quinsey, ...	0	303	303	303	0	0	0	0	
18	Bronchitis, ...	6	425	431	428	0	0	0	3	
19	Pleurisy, ...	0	140	140	140	0	0	0	0	
20	Asthma, ...	0	56	56	0	56	0	0	0	
21	Lungs, Diseases of ...	0	34	34	34	0	0	0	0	
	5.									
22	Teething, ...	0	122	122	0	122	0	0	0	
23	Worms, ...	0	93	93	93	0	0	0	0	
24	Ascites, ...	5	26	31	0	29	2	0	0	
25	Hernia, ...	0	14	14	0	14	0	0	0	
26	Colic or Ileus, ...	0	104	104	104	0	0	0	0	
27	Stomach, Diseases of ...	0	445	445	440	0	0	0	5	Mostly Dyspepsia, from de-
28	Hepatitis, ...	5	241	246	199	44	0	0	3	rangement of stomach and bowels.
29	Jaundice, ...	0	29	29	29	0	0	0	0	
30	Spleen, Diseases of ...	4	358	362	234	125	0	0	3	

Numbers.	Diseases.	Remained.	Admitted.	Total.	Discharged cured.	Relieved.	Absconded.	Died.	Remaining.	Remarks.
	6.									
31	Strictura, ...	0	31	31	0	31	0	0	0	
	7.									
32	Uterus, Diseases of ...	0	146	146	146	0	0	0	0	
	8.									
33	Rheumatism, ...	12	1700	1712	1699	0	0	0	13	
34	Joints, Diseases of ...	0	125	125	125	0	0	0	0	
	9.									
35	Carbuncle, ...	0	26	26	26	0	0	0	0	
36	Phlegmon, ...	0	300	300	300	0	0	0	0	
37	Ulcer, ...	9	1363	1372	1366	0	0	0	6	
38	Fistula, ...	0	73	73	73	0	0	0	0	
39	Skin, Diseases of ...	7	789	796	409	230	150	0	7	Principally cases of Psora, Herpes, Lepra Vulgaris, and Elephantiasis.
	10.									
40	Causes not specified, ...	2	624	626	626	0	0	0	0	Including Dysecœa, Odontalgia, Orchitis, and Neuralgia.
41	Contusions, ...	6	405	411	407	0	0	0	4	
42	Wounds, ...	2	370	372	369	0	0	0	3	
43	Stricture, ...	2	53	55	54	0	0	0	1	
44	Dislocations and Subluxations, ...	0	25	25	25	0	0	0	0	
45	Burns and Scalds, ...	0	188	188	186	0	0	0	2	
	Total, ...	242	35242	35484	32558	2396	330	0	200	

Medical College, 22nd March, 1850.

Fred. J. Mouat, M. D., *Secretary.*

No. V.

Return of Minor Surgical Operations performed at the Out-Door Dispensary of the Medical College, during the year 1849.

Nature of Operation.	Number.	Result.			Remarks.
		Died.	Unknown.	Cured.	
Amputation of fingers and toes, ...	6	0	0	6	
„ of hypertrophied prepuce...	4	0	0	4	
Encysted and other tumors excised, ...	25	0	0	25	
Tapping for abdominal dropsy, ...	9	0	0	9	
„ for hydrocele, ...	662	0	0	662	
Fistula laid open, ...	73	0	0	73	
Abscesses opened, ...	856	0	0	856	
Teeth extracted, ...	395	0	0	395	
Operation for phymosis, ...	62	0	0	62	
„ for paraphymosis, ...	48	0	0	48	
„ for onychia, ...	43	0	0	43	
„ for ranula, ...	2	0	0	2	

Nature of Operation.	Number.	Result.			Remarks.
		Died.	Unknown.	Cured.	
Luxations of the shoulder joint reduced,	23	0	0	23	
„ of the thumb, ...	1	0	0	1	
„ of the lower jaw, ...	3	0	0	3	
Prolapsus ani reduced, ...	10	0	0	10	
Venesection and arteriotomy, ...	300	0	0	300	
Catheters passed for retention of urine,	131	0	0	131	
Setons introduced, ...	24	0	0	24	
Foreign bodies extracted, ...	18	0	0	18	
Incarcerated hernia reduced by taxis, ...	14	0	0	14	
Fractures put up, ...	53	0	0	53	
Total, ...	2762	0	0	2762	

Medical College, 22nd March, 1850.

Fred. J. Mouat, M. D., *Secretary.*

No. VI.

Return of Eye Diseases treated at the Ophthalmic Ward of the Out-Door Dispensary of the Medical College, by Professor R. O'Shaughnessy, during the year 1849.

Diseases.	Remaining.	Admitted.	Total.	Discharged cured.	Relieved.	Absconded.	Remaing under treatment.	Remarks.
Acute ophthalmia, ...	0	246	246	231	0	14	1	
Chronic ophthalmia,.....	1	72	73	27	28	16	2	
Interstitial abscess of the cornea, ...	2	23	25	17	0	8	0	
Ulcer of the cornea,.....	0	28	28	23	0	4	1	
Sloughing cornea,.....	0	10	10	7	0	3	0	
Vascular cornea, ...	0	6	6	5	0	0	1	
Opacity of the cornea,...	1	26	27	14	7	6	0	
Wounds of the cornea,...	0	3	3	3	0	0	0	
Inflammation of the internal tunics, ...	0	39	39	27	9	2	1	
Pustular ophthalmia, ...	1	14	15	13	0	2	0	
Catarrhal ophthalmia,...	0	5	5	5	0	0	0	
Purulent ophthalmia, ...	0	3	3	3	0	0	0	
Cataract incipient and mature, ...	6	172	178	70	96	8	4	
Amaurosis, ...	0	6	6	0	6	0	0	
Pterygium, ...	0	9	9	6	2	1	0	
Impaired vision, ...	0	42	42	24	0	18	0	
Prolapsus Iridis, ...	0	10	10	8	0	2	0	
Staphyloma, ...	1	3	4	1	3	0	0	
Dislocation of the lens into the anterior chamber,.....	0	0	0	0	0	0	0	
Closed pupil,.....	0	2	2	2	0	0	0	
Hemaralopia,.....	0	0	0	0	0	0	0	
Trichiasis, ...	0	0	0	0	0	0	0	
Nyctalopia, ...	0	4	4	3	0	1	0	
Glaucoma,.....	0	2	2	0	2	0	0	
Entropium, ...	1	0	1	1	0	0	0	
Obstruction of the nasal duct, ...	2	8	10	7	0	3	0	
Ecchymosis, ...	0	4	4	3	0	0	1	
Hordeolum, ...	0	0	0	0	0	0	0	
Cancerous ulceration of internal canthus,	0	0	0	0	0	0	0	
Total, ...	15	737	752	500	153	88	11	

Fred. J. Mouat, M. D., *Secretary.*

Medical College, 22nd March, 1850.

No. VII.

Tabular Statement of number of Patients treated in the Out-Door Dispensary of the Medical College, during each month of the Year 1849.

Number.	Months.	1849.	Remarks.		
			Of the numbers mentioned in the preceding columns there attended.		
			Once,	...	4325
			Twice,	...	3122
			Thrice,	...	2246
1	January, ...	1538	Four times,	...	1622
2	February, ...	1353	Five times,	...	1374
3	March, ...	1633	Six times,	...	1245
4	April, ...	1533	Seven times,	...	954
5	May, ...	1540	Eight times,	...	836
6	June, ...	1466	Nine times,	...	621
7	July, ...	1606	Ten times,	...	530
8	August, ...	1581	Eleven times,	...	422
9	September, ...	1777	Twelve times,	...	340
10	October, ...	1573	Oftener,	...	105
11	November, ...	1116			
12	December, ...	1026			
	Total, ...	17742	Total,	...	17742

Fred. J. Mouat, M. D., *Secretary.*

Medical College, 22nd March, 1850.

No. VIII.

FEMALE HOSPITAL LYING-IN WARD.

The number of cases admitted from the 1*st of March* 1849 *to* 21*st March* 1850, *is* 61.

Admitted.	Delivered.	Boys Living.	Girls Living.	Still-born.		Death of Children.		Operations.		Death of the Mothers.	Remarks.
				Boys.	Girls.	Boys.	Girls.	Craniotomy.	Forceps.		
61	55	28	17	5	1	3	1	1	1	2	

FRED. J. MOUAT, M. D., *Secretary.*

Medical College, 27th March, 1850.

Appendix B. No. I.

Return of Sub-Assistant Surgeons educated at the Medical College, for the Year 1848.

Fort William, Medical Board Office, 27th March, 1849.

No.	Names.	Date of Rank.	Stations to which attached.	Conduct and Qualifications.	Remarks.
1	Oma Churn Sett, ...	13th March 1839,	Charity Hospital, Burdwan, ...	A very steady, well informed man.	
2	Sama Churn Dutt,.....	13th March	Govt. Dispy., Jhubulpore,	Excellent.	
3	Isser Chunder Gangooley,	1st Jan. 1840,	Alms House, Midnapore,	Conduct very good, active and intelligent.	
4	Ramnarain Doss,.....	1st Jan.	Civil Station and Dispensary, Burdwan, ...	Of superior qualifications.	
5	Jaudub Chunder Sett, ...	1st Jan.	Govt. Dispensary, Barielly, ...	Both most creditable.	
6	Nobinchunder Paul, ...	1st Jan.	Govt. Dispensary, Benares, ...	Attentive and efficient.	
7	Mr. R. G. Heming,.....	1st Jan.	Calpee, ...	No report received.	
8	Calachand Day, ...	14th Jan. 1841,	Govt. Dispensary, Bhowanipore, ...	Highly talented and attentive.	
9	Rajkisto Chatterjee, ...	10th Feb, ...	Govt. Dispensary, Ghazeepore,	Conduct neglectful, qualification respectful.	
10	Jaudub Chunder Dhara,...	10th Feb.	Govt. Dispensary, Moorshedabad, ...	Good.	

11	Chimun Lall, ...	10th Feb.	Govt. Dispensary, Delhie,	Steady and an intelligent man.	
12	Mr. C. T. Imlay,.....	10th Feb.	.....	.....	A patient in the Lunatic Asylum, since 4th October 1848.
13	Nilmoney Dutt, ...	24th March,.....	Govt. Dispensary, Dacca,	Very good.	
14	Budden Chunder Chowdry,	11th Feb. 1842,	Emambarah Hospital, Hooghly, ...	Conduct excellent, and he is most attentive to his duties.	
15	Mohes Chunder Naun, ...	11th Feb.	Govt. Dispensary, Muttra,	Both particularly good.	
16	Dinonauth Dhur, ...	11th Feb.	Charity Hospital, Mulnoth,	No report received.	
17	Sadoo Churn Mullick, ...	11th Feb.	Govt. Dispy., Futtehghur,	Good.	
18	Shama Churn Sircar, ...	11th Feb.	Pilgrim Hospital, Gyah,...	Very good.	
19	Purmanund Sett, ...	11th Feb.	Jail Hospital, Bijnore, ...	Good, well qualified and most attentive to his duties.	
20	Mohes Chunder Dey, ...	11th Feb.	Ganges Canal, Roorkee,...	Satisfactory.	
21	Gopaulkisto Goopt, ...	23rd Feb.	Jail & Civil Station, Sirsa,	Good.	
22	Mr. F. DeCruze,.....	28th Dec.	Civil Station, Agra, ...	Attentive and satisfactory.	
23	Shama Churn Dey, ...	28th Dec.	Govt. Dispensary, Saharunpore, ...	No report received.	
24	Chunder Seekhur Holdar,..	28th Dec.	Medical School, Lahore,...	No report received.	
25	Tara Chand Pyne,.....	28th Dec.	Govt. Dispensary, Moradabad, ...	Most attentive, well qualified.	

No.	Names.	Date of Rank.	Stations to which attached.	Conduct and Qualifications.	Remarks.
26	Govind Chunder Doss, ...	28th Dec. 1842,	Govt. Dispensary, Cawnpore, ...	Zealous and attentive, ...	Supernumerary.
27	Purmessur Doss,.....	28th Dec.	Jail, Goorgaon, ...	Steady, and performs his duties very well.	
28	Inayut Hosein, ...	28th Dec.	Residency Hospital, Lucknow, ...	Both satisfactory.	
29	Nubbokissen Goopt, ...	23rd Oct. 1843,	.....	.....	Remanded to the Medical College.
30	Purmessur Shaka, ...	25th March 1844,	Meywar Bheel Corps, ...	No report received.	
31	Mr. L. DeSouza,.....	18th March	.....	.....	Remanded to the Medical College.
32	Dhurmodoss Bose, ...	18th March	Govt. Dispensary, Agra,..	Attentive and satisfactory.	
33	Hurronauth Mitter, ...	26th May 1845,	Dispensary, Burisaul,.....	No report received.	
34	Wuzeer Khan, ...	26th May	Jail, Dumoh, ...	Good and qualified.	
35	Dwarkanauth Chatterjee,	26th May	Civil Station, Ramree, ...	No report received.	
36	Taruck Chunder Lahory,	26th May	Ganges Canal, Dadoopore,	Conduct good, qualifications very fair.	
37	Kally Churn Lahory,.....	26th May	.....	.....	Employed by the Rajah of Nuddea.
38	Tara Chand Sen,.....	20th May 1846,	Jail and Civil Station, Kythal, ...	Good.	
39	Obhoy Churn Neughee,...	20th May	Govt. Dispensary, Shajehanpore, ...	No report received.	
40	Doyal Chand Bysack,.....	20th May	Dispensary, Jehanabad,...	No report received.	

41	Coonjobeharee Chatterjee,	20th May	Hindoo College and Madrassa, ...	No report received.	
42	Monohur Mookerjee, ...	20th May	Govt. Dispy., Cawnpore,	Zealous & attentive.	
43	Tameez Khan, ...	16th June 1847,	Govt. Dispy., Almorah,...	No report received.	
44	Jaudub Chunder Ghose,...	16th June	Govt. Dispy., Mirzapore,...	No report received.	On detached duty, in Medical charge of Civil Station of Juanpore.
45	Kadarnauth Dey, ...	16th June	....	.....	Died 25th March 1848.
46	Omes Chunder Bose, ...	16th June	Govt. Dispy., Gorruckpore,	Both good.	
47	Ramsoonder Ghose, ...	16th June	Jail, Umballa, ...	Good.	
48	Tara Chand Bannerjee, ...	16th June	Govt. Dispy., Allahabad,...	Both good.	
49	Buddinauth Bromo, ...	16th June	Govt. Dispy., Chittagong,	Exceedingly good.	
50	Shushibhoosun Seal, ...	16th June	Medical College, Female Hospital, ...	No report received.	
51	Kadarnauth Ghose,.....	16th June	City Dispy., Purneah, ...	Good.	
52	Kalleenauth Moozumdar,	16th June	In Medical charge of the Govt. Geologist's party,	No report received.	
53	Mr. F. J. Pettingal, ...	25th May 1848,	Field Hospital, Punjaub Army, ...	Promises to be highly useful.	Doing duty at Govt. Dispensary Mirzapore, during the absence of Sub-Asst. Surg. Jaudub Chunder Ghose at Juanpore by order Lt. Govr. N. W. P., 1st Nov. 1848.
54	Neelmadub Mookerjee, ...	25th May.....	Govt. Dispensary, Mirzapore, ...	Both highly satisfactory.	

No.	Names.	Date of Rank.	Station to which attached.	Conduct and Qualifications.	Remarks.
55	Govind Chunder Dutt,...	25th May 1848,...	Govt. Dispensary, Pooree,	Performs his duty satisfactorily.	Joined 10th Sep. 1848, temporarily in Medical charge of the Civil Station of Sarun.
56	Mr. D. Picachy, ...	25th May , ...	Dispensary, Tirhoot, ...	Very good, ...	

J. Forsyth, *Surgeon*,
Secy. Medical Board.

(True Copy,)

Fred. J. Mouat, M. D.,
Secretary to the Council of Education.

No. II.

Return of Sub-Assistant Surgeons educated at the Medical College, for the year 1849.

Fort William, Medical Board Office, 30th March, 1850.

No.	Names.	Date of Rank.	Stations to which attached.	Conduct and Qualifications.	Remarks.
1	Oma Churn Sett, ...	13th Feb. 1839,	Charity Hospital, Burdwan,	Good and well informed.	
	Sama Churn Dutt, ...	" "	Govt. Dispensary, Jubbulpore, ...	Excellent.	
	Isser Chunder Gangooley,	1st Jan. 1840,	Alms House, Midnapore,..	Good and intelligent.	
	Ramnarain Doss,.....	" "	Civil Station, Budaon, ...	Superior qualifications.	
5	Jaudub Chunder Sett,.....	" "	Govt. Dispensary, Barielly,	Excellent.	
	Nobin Chunder Paul,.....	" "	Dispensary, Benares, ...	Attentive and efficient.	
	Mr. R. G. W. Heming, ...	" "	Civil Station, Calpee, ...	No report received.	
	Callachand Day, ...	14th Jan. 1841,	Govt. Dispensary, Bhowanipore, ...	Talented and attentive.	
9	Rajkisto Chatterjee, ...	10th Feb. 1841,	....	.....	Removed from Ghazeepore Dispensary to Govt. Geologist's party, by order of Depy. Govr. of Bengal, 6th Feb. 1849, and directed to remain unemployed by order of Depy. Govr. of Bengal, 22nd Aug. 1849, in consequence of declining to join.

No.	Names.	Date of Rank.	Station to which attached.	Conduct and Qualifications.	Remarks.
10	Jaudub Chunder Dhara,...	10th Feb. 1841,	Govt. Dispensary, Moorshedabad, ...	Active and intelligent.	
	Chimun Loll, ...	„ „	Govt. Dispensary, Delhie,	Intelligent and zealous.	
	Nilmoney Dutt, ...	24th March 1841,	Govt. Dispensary, Dacca,	Intelligent and attentive to his duties.	
	Budden Chunder Chowdry,	11th Feb. 1842,	Emambarah Hospital, Hooghly, ...	Excellent and attentive to his duties.	
	Mohesh Chunder Naun,...	„ „	Govt. Dispensary, Muttra,	Satisfactory.	
15	Dinonath Dhur, ...	„ „	Charity Hospital, Mulnauth,	No report received.	
	Sadoo Churn Mullick, ...	„ „	Govt. Dispensary, Futtyghur, ...	Attentive.	
	Shama Churn Sircar, ...	„ „	Pilgrim Hospital, Gyah,...	Good.	
	Purmanund Set, ...	„ „	Sukea's Lane, Govt. Dispensary, Calcutta, ...	No report received.	
	Mohes Chunder Dey, ...	„ „	Ganges Canal, Roorkee, ...	Good and intelligent.	
20	Gopaulkisto Goopt,.....	23rd „	Civil Station, Sirsa, ...	Good.	
	Mr. F. F. DeCruze, ...	28th Dec. 1842,	Civil Station, Agra, ...	Satisfactory and good.	
	Shama Churn Dey, ...	„ „	Govt. Dispensary, Saharunpore,.....	Steady and attentive.	
	Chunderseekur Holdar, ...	„ „	Civil Station, Lahore, ...	Good and proficient.	
	Tara Chand Pyne, ...	„ „	Govt. Dispensary, Moradabad, ...	Attentive and well qualified.	
25	Govindchunder Doss,.....	„ „	Govt. Dispensary, Allahabad,...	Good.	

	Purmessur Doss,	,,	,,	Civil Station, Goorgaon,	Intelligent.	
	Syud Inayut Hossein,	,,	,,	Residency Hospital, Lucknow,	Satisfactory.	
	Purmessur Shaha,	25th March	1844,	Meywar Bheel Corps,	No report received.	
	Dhurmodoss Bose,	18th ,,		Govt. Dispensary, Agra,	Satisfactory.	
30	Hurronath Mitter,	26th May	1845,	Burrisaul Dispensary,	No report received.	
	Wuzeer Khan,	,,	,,	Civil Station, Dumoh,	Good.	
	Dwarkanath Chatterjee,	,,	,,	Civil Station, Bhaugulpore,	No report received,	Appointed from Ramree to Bhaugulpore by Depy. Govr. of Bengal 10th Oct. 1849. Joined 3rd Dec. 1849.
	Taruck Chunder Lahory,	,,	,,	Ganges Canal, Dadoopore,	No report received,	On leave from 1st Oct. 1849.
	Tarachand Sen,	20th May	1846,	Civil Station, Kythal,	Good.	
35	Obhoy Churn Newghee,	,,	,,	Govt. Dispensary, Shajehanpore,	Good.	
	Doyalchand Bysack,	,,	,,	Jehanabad Dispensary,	.....	On leave.
	Coonjobeharee Chatterjee,	,,	,,	Hindoo and Madrassa Colleges,	No report received.	
	Monohur Mookerjee,	,,	,,	Govt. Dispensary, Cawnpore,	Excellent.	
	Tameez Khan,	16th June	1847,	Govt. Dispensary, Almorah,	Good.	
40	Jaudub Chunder Ghose,	,,	,,	Civil Station, Juanpore,	No report received.	
	Omes Chunder Bose,	,,	,,	Govt. Dispensary, Goruckpore,	Good.	
	Ramsoonder Ghose,	,,	,,	Civil Station, Umballa,	Good.	
	Tarachand Bannerjee,	,,	,,	Govt. Dispensary, Allahabad,	.....	On Sick leave for 9 months by order of Lieut. Govr. N. W. P., 4th Oct. 1849.
	Buddinauth Bromo,	,,	,,	Govt. Dispensary, Chittagong,	Unexceptionable.	
45	Shushibhoosun Seal,	,,	,,	Unknown.		
46	Kedarnath Ghose,	,,	,,	.....	....	Died at Purneah, 5th Nov. 1849.

No.	Names.	Date of Rank.	Station to which attached.	Conduct and Qualifications.	Remarks.
47	Kalleenath Moozumdar,...	16th June 1847,	Govt. Dispensary, Ghazeepore, ...	Good and efficient, ...	Transferred from Govt. Geologist's party to Ghazeepore by order of Depy. Govr. of Bengal, 6th Feb. 1849.
	Mr. F. J. Pettingal, ...	25th May 1848,	Malwa Bheel Corps, ...	No report received.	
	Neelmadub Mookerjee, ...	„ „	Govt. Dispensary, Mirzapore, ...	Excellent.	
50	Govindchunder Dutt,.....	„ „	Govt. Dispensary, Pooree,	Satisfactory.	
	Mr. D. Picachy, ...	„ „	Dispensary, Moozuffurpore,.....	Good.	
	Nobinkristo Bose, ...	12th April 1849,	Civil Station, Dacca, ...	.....	Appointed to Civil Station Dacca, by order of Depy. Govr. of Bengal, 10th Oct. 1849. *Not joined*
	Mr. W. J. Ellis, ...	„ „	Civil Station, Pubna, ...	No report received,...	Appointed to Civil Station Pubna, by order of Depy. Govr. of Bengal, 27th June 1849. Date of joining unknown.
	Nobogopaul Ghosal, ...	„ „	Rajah's Hospital, Nagpore,	No report received,...	Appointed to Nagpore Rajah's Hospital, by order of the Govr. Genl. of India, 28th June 1849. Date of joining unknown.
55	Kallydoss Nundy, ...	„ „	....	.....	Appointed to Civil Station Bancoorah, by order of Depy. Govr. of Bengal, 12th Oct. 1849. Date of joining unknown. Delivered over charge 24th Nov. 1849. Remains unemployed.

	Radanauth Chuckerbutty,	„	„	.....	.....	Services dispensed with by order of Depy. Govr. of Bengal, 2nd Nov. 1849, in consequence of declining to proceed to Ramree.
	Sibchunder Bysack, ...	„	„	.....	.....	Unemployed.
	Mr. A Thomas, ...	„	„	Civil Station, Ramree, ...	No report received,...	Appointed to Civil Station Ramree, by order of Depy. Govr. of Bengal, 2nd Nov. 1849. Joined 25th idem.
59	Fukeerchunder Bose, ...	„	„	Sautguria Dispensary, under Baboo Prannauth Chowdry, ...	No report received,	Appointed to Sautguria, Dispy. with the approval of the Depy. Govr. of Bengal, 3rd Aug. 1849. Institution opened 26th Oct. 1849.

J. Forsyth, *Surgeon*,
Secretary Medical Board.

No. III.

Return of Native Doctors educated in the Military Class of the Medical College, for the year 1848.

FORT WILLIAM, MEDICAL BOARD OFFICE, 27TH MARCH, 1849.

No.	Names.	Date of Appointment.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
1	Mahomed Hossain, ...	3rd Nov. 1841,	29th Regt. N. I., Hazeepore, ...	Good.	
2	Mahomed Cassim Alli,	„ „	8th Regt. Irregular Cavalry, Benares, ...	Good.	
3	Fyzollah Khan, ...	„ „	67th Regt. N. I., Cawnpore, ...	Attentive and efficient.	
4	Alli Bux, (2nd,) ...	„ „	11th Regt. Light Cavalry, Mooltan, ...	Qualificatious good, has not of late been careful of the Medicines in his charge.	
5	Bux Khan, ...	„ „	72nd Regt. N. I., Mooltan, ...	Attentive and intelligent.	
6	Chunder Deen Sukull,	„ „	Garrison of Agra, ...	In every respect excellent.	
7	Alli Bux, (1st,) ...	„ „	Doing duty with the Commissioner's Escort, Wudnee, ...	No report received.	
8	Mozuffer Hossein, ...	„ „	9th Light Cavalry, Neemuch, ...	An attentive good man, very well informed and assiduous in his duties.	
9	Jelall Ooddeen, ...	„ „	24th Regt. N. I., Lucknow, ...	Good in every respect.	
10	Shaikh Mungloo, ...	„ „	Doing duty with the Army Head Quarters, ...	No report received.	
11	Odhin Sing, ...	20th June 1842,	4th Light Cavalry (Lancers,) Cawnpore, ...	Good.	

12	Kundy Sing, ...	„	„	Civil Station, Mungleaye, ... Attentive.
13	Summon Khan, ...	„	„	1st Irregular Cavalry, Neemuch, Well qualified and attentive.
14	Hingun, (2nd,) ...	„	„	8th Irregular Cavalry, Benares, Good.
15	Meer Caussem Alli, ...	„	„	Jail and Pilgrim Hospital Gowahatty, ... Good and ordinary.
16	Cally Persaud, ...	„	„	31st Regt. N. I., Mooltan,..... Very good.
17	Golam Rujub, ...	„	„	52nd Regt. N. I., Mooltan, ... Both excellent.
18	Meer Golam Shaw, ...	„	„	Jeypore Political Agency, Neemuch, ... Good.
19	Ghassy Khan, ...	„	„	63rd Regt. N. I., Agra, ... Seems to be steady.
20	Meerza Bauker Hossain,	„	„	11th Regt. Light Cavalry, Mooltan, ... Good.
21	Oaheed Allee, ...	„	„	37th Regt. N, I., Lahore, ... Good.
22	Abdool Wahid, ...	„	„	5th Regt. N. I., Dinapore,..... Good and satisfactory.
23	Shaikh Elahee Bux, ...	22nd Dec.	1842,	Detachment Sylhet Light Infantry Battalion Cachar, ... Satisfactory.
24	Hedyat Oollah, ...	„	„	45th Regt. N. I., Punjaub,..... Attentive, good.
25	Torab Ally, ...	„	„	16th Regt. N. I., Barrackpore,... Good.
26	Hingun, (1st) ...	„	„	Sylhet Light Infantry. ..... Satisfactory.
27	Shaikh Abdoollah, ...	„	„	Ramghur Light Infantry Battalian Doorundah, ... Good and attentive.
28	Seetul Sing, ...	9th June	1843,	2nd Assam Light Infantry Battalion Gowahatty, ... Good and superior.
29	Essory Loll, ...	„	„	Jail Nursingpore, ... Satisfactory.
30	Ghunsam Sing, ...	„	„	7th Regt. N. I., Punjaub, ... Good.
31	Khandam Hossein, ...	„	„	Station Hospital Darjeeling,..... Good.
32	Sooltan Khan, ...	„	„	Artillery Division Camp Mooltan, ... Attentive, but not intelligent.
33	Bissessor Sing, ...	„	„	Civil Station, Bauliah, ... Well behaved, active, and very attentive.
34	Sahebdad Khan, ...	„	„	56th Regt. N. I., Punjaub, ... Good.
35	Mendhy Khan, ...	„	„	Detachment 2nd Regt. N. I., Grs. Sirsa. ..... Conduct and qualifications ordinary.

No.	Names.	Date of Appointment.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
36	Jhoomuck Lall, ...	8th Sept. 1843,	Residency Katmandoo, ...	Good.	
37	Ameer Khan, ...	„ „	....	....	Dismissed the Service 3rd April 1847, (omitted to be inserted in last annual return,)
38	Oozeer Khan, ...	„ „	Buheree Dispensary, ...	Both good.	
39	Bhowanee Sing, ...	„ „	Hosearpore 1st Regt. Sikh Local Infantry, ...	Good.	
40	Hedyat Alli Khan, ...	14th June 1844,	Commissioner's Establishment, Gowahatty, ...	Good and ordinary.	
41	Ramdhone, ...	„ „	61th Regt. N. I., Allahabad,... ..	Good, not very efficient.	
42	Meer Akbur Alli, ...	„ „	Ex-Ameers of Scinde, Hazareebaugh, ...	No report received.	
43	Hossain Bux, ...	„ „	Civil Station, Maunbhoom, ...	No report received,	
44	Mirza Hossain Bux. ...	„ „	58th Regt. N. I., Ferozepore, ...	No report received.	
45	Meer Rujub Alli, ...	„ „	Jail Hospital, Tezpore, ...	Attentive.	
46	Meer Alli Bux, ...	„ „	15th Regt. N. I., Punjaub, ...	Attentive.	
47	Moshaeb Alli, ...	„ „	3rd Regt. N. I., Camp, ...	Both good.	
48	Shaikh Yar Alli, ...	28th March 1845,	74th Regt. N. I., Neemuch, ...	Tolerable.	
49	Luchmun Sing, (1st,)...	„ „	8th Battalion Arty., Cawnpore,...	Good and attentive.	
50	Shaikh Matuboodeen,...	„ „	2nd Regt. Sikh Local Infantry, Kangra, ...	Very good.	
51	Lall Khan, ...	„ „	....	....	Dismissed the Service by sentence of court martial, — July 1848.
52	Shaikh Meah Jan, ...	„ „	Head Quarters Camp, 4th Company 6th Battalion Artillery,	Good.	

53	Shaikh Emam Alli, ...	„ „	13th Regt. N. I., Punjaub, ...	Good.	
54	Shaikh Ilahee Bux, ...	„ „	7th Company Pioneers, Punjaub,	Well qualified.	
55	Shaikh Gowhur Alli,...	„ „	....	....	Died 6th March 1848 at Benares.
56	Doorga Churn Lall, ...	„ „	13th Irregular Cavalry, ...	No report received.	
57	Shaikh Hossein Alli, ...	„ „	Under Captain Hill, Trigonometrical Survey, ...	No report received.	
58	Shaikh Khoda Bux, ...	„ „	Left Wing, 12th Regt. N. I., ...	No report received.	
59	Punna Lall, ...	„ „	With Governor General's Agent, Doorundah, ...	Good and attentive.	
60	Ulleef Khan. ...	„ „	Arracan Light Battalion, Akyab,	Very good.	
61	Ramsahae Lall, ...	„ „	48th Regt. N. I., Benares,.....	Qualifications and conduct good.	
62	Mahomed Khan, ...	„ „	Civil, Hazareebaugh, ...	Good.	
63	Warris Alli, ...	23rd Jan. 1846,	5th Company, Pioneers, Punjaub, ...	Well qualified.	
64	Ushruf Alli Khan, ...	„ „	Left Wing 16th Irregular Cavalry, Loodianah, ...	No report received.	
65	Shaikh Abdoolla, ...	„ „	Hurrianah Light Infantry, Hansi,	Attentive.	
66	Meer Akbur Alli, ...	„ „	4th Sikh Local Infantry, Loodianah, ...	Good.	
67	Syad Mahomed Waheed Ushruff, ...	„ „	Sappers and Pioneers, Mooltan,	Good and satisfactory.	
68	Wuzeer Khan, (1st,) ...	„ „	6th Regt. Light Cavalry, Punjaub, ...	Steady and improving.	
69	Khosal Ram, ...	„ „	Jail Hospital, Agra, ...	Attentive and satisfactory.	
70	Meer Bundah Alli, ...	„ „	Jail Hospital, Futtyghur, ...	Good and attentive.	
71	Shaikh Lal Mahomed,...	„ „	74th Regt. N. I., Neemuch, ...	Tolerable.	
72	Wuzeer Khan, (2nd,)...	„ „	6th Regt. Irregular Cavalry, Nocoda, ...	No report received.	
73	Shaikh Ruheem Buksh,	„ „	Field Hospital Army of the Punjaub, ...	Good.	

No.	Names.	Date of Appointment.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
74	Choonee Lall, ...	23rd Jan. 1846,	14th Regt. N. I., Lahore, ...	Conduct good, qualifications inferior.	
75	Shaikh Souban Alli, ...	„ „	3rd Light Cavalry, Muttra, ...	Fair.	
76	Shaikh Nubbee Buksh,	„ „	Medical duties, Simla, ...	Good,	
77	Shaikh Emam Alli, ...	„ „	Civil Station and Jail, Hosearpore, ...	Good.	
78	Nuck Chadee Sing, ...	„ „	....	....	No report received of this man since his admission into the Service, therefore struck off.
79	Abdool Summeed, ...	„ „	11th Irregular Cavalry, Mooltan,	No report received.	
80	Hingun Khan, ...	„ „	1st Regt. N. I., Govindghur, ...	Good.	
81	Baboo Ram, ...	„ „	Governor General's Body Guard, Mukhoo, ...	Good.	
82	Luchmun Singh, ...	„ „	2nd Company 7th Battalion Artillery, Punjaub, ...	Very good.	
83	Jowahur Lall, ...	„ „	Commissioner and Superintendent, Sutledge States, ...	Both good.	
84	Shaikh Alli Buksh, (1st,)	„ „	Civil Station, Cuttack, ...	No report received.	
85	Fyzoollah Khan, ...	„ „	Field Hospital Army of Punjaub, ...	No report received.	
86	Shaikh Faqueer Mahomed, ..	„ „	34th Regt. N. I., Loodianah, ...	Good, attentive.	
87	Wuzeer Alli Khan, (3rd,) ...	„ „	37th Regt. N. I., Lahore, ...	Good.	
88	Meerza Nourez Beg, ...	„ „	72nd Regt. N. I., Mooltan, ...	Attentive.	
89	Meer Hyder Alli, ...	30th „	Regt. of Loodianah, Cawnpore,	Both pretty good.	

90	Shaikh Alli Mahomed,	9th April 1847,	23rd Regt. N. I, Phillore,.....	Is a very clever man, and possesses good knowledge of medicine,
91	Sunt Persaud Sing, ...	„ „	Detachment Kemaon Local Battalion, Lohooghaut, ...	Both satisfactory.
92	Shamut Oollah, ...	„ „	Corps of Sappers and Pioneers, Mooltan, ...	Good and satisfactory,
93	Ushruff Alli Khan, ...	„ „	Station of Nynee Tal, ...	Good.
94	Mirza Ramzan Alli, ...	„ „	Station Staff Hospital, Umballa,	Good.
95	Ameer Khan, ...	„ „	Station Staff Hospital, Dugshai,	Good.
96	Meer Enayut Alli, ...	„ „	Civil, Patna, ...	Diligent and attentive.
97	Pursun Lall, ...	„ „	Nusseeree Rifle Battalion, Jotug,	Intelligent.
98	Shaikh Alli Buksh, ...	„ „	50th Regt. N. I., Lahore, ...	Good.
99	Meer Enayut Hossein,	„ „	7th Regt. N. I., Jullunder, ...	Good.
100	Shaikh Mohomed Hossein, ...	„ „	2nd Irregular Cavalry, Camp, ...	Not so good as formerly.
101	Shaikh Kurreem Udin,	„ „	2nd Regt. Sikh Local Infantry, Kangra, ...	Very good.
102	Shaikh Mashoom, ...	„ „	9th Battalion Artillery, Dum Dum, ...	Conduct good, and is efficient in the performance of his duty.
103	Shaikh Kulleem Oollah,	„ „	39th Regt. N. I., Dinapore, ...	Good.
104	Shaikh Soopum, ...	„ „	60th Regt. N. I., Camp Ferozepore, ...	Tolerable.
105	Shaikh Kurreem Buksh,	„ „	Civil Station of Mussoorie, ...	Conduct good, qualifications fair.
106	Shaikh Emam Alli, ...	„ „	Native Garrison Hospital, Chunar, ...	Both good.

No.	Names.	Date of Appointment.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
107	Wuzeer Alli Khan, ...	9th April 1847,	Jail at Mundlaisir, ...	No report received.	
108	Lalla Ramdyal, ...	„ „	40th Regt. N. I., Barrackpore,...	Conduct good, qualifications indifferent.	
109	Shaikh Torab Alli, ...	„ „	....	....	Dismissed the Service 26th July 1848.
110	Shaikh Abdool Ajuz,...	„ „	Civil Station, Jessore, ...	Both very good.	
111	Shaikh Kurreem Bux, (2nd,) ...	14th April 1848,	67th Regt. N. I., Cawnpore,.....	Attentive and efficient.	
112	Mirza Mahomed Jaun,	„ „	Field Hospital, Punjaub Army,	Good.	
113	Meer Hedyut Alli, ...	„ „	Left Wing 47th Regt. N. I., Mynpoorie, ...	Both very good.	
114	Shaikh ElaheeBux, (1st,)	„ „	67th Regt. N. I., Cawnpore,.....	Attentive and efficient.	
115	Shaikh Kurreem Bux, (1st,) ...	„ „	9th Regt. N. I., Futtyghur, ...	Conduct and qualifications good.	
116	Shaikh Shair Alli, ...	„ „	39th Regt. N. I., Dinapore, ...	Good.	
117	Fyzoolla Khan, ...	„ „	Field Hospital, Punjaub Army,	Good.	
118	Emdad Hossein, ...	„ „	Harowtee Political Agency,.....	Very good.	
119	Myboob Khan, ...	„ „	14th Regt. N. I., Berhampore,...	No report received.	
120	Abdool Hossein, ...	„ „	With the Deputy Collector, Bhaugulpore, ...	Good.	
121	Syud Abdool Onahud,	„ „	61st Regt. N. I., Loodianah, ...	Excellent.	
122	Shaikh Mungloo, ...	„ „	35th Regt. Light Infantry, Barrackpore, ...	Good.	
123	Khajah Hingun, ...	„ „	Jullunder Dispensary, ...	Good.	
124	Abdoola Khan, ...	„ „	Wing 55th Regt., Nagode, ...	Attentive.	
125	Saduck Ali Khan, ...	„ „	Civil Station, Shapoora, ...	Good.	

126	Mahomed Ufzul, ...	„	„	40th Regt. N. I., Barrackpore,...	Conduct good, qualifications very fair.
127	Shaikh Sahadut, ...	„	„	7th Regt. Light Cavalry, Camp,	Both good.
128	Bakur Khan, ...	„	„	2nd Company 7th Battalion, Artillery, ...	Conduct good, qualifications middling.
129	Jahur Ul Huq ...	„	„	13th Irregular Cavalry, Mukhoo,	No report received.
130	Khoseal Ram, ...	„	„	45th Regt. N. I,, ...	Both good.
131	Mirza Kudrut Ali, ...	„	„	Residency, Lahore, ...	No report received.
132	Ruhmuth Ali, ...	„	„	13th Regt. N. I.	No report received.
133	Shaikh Abdul Ouahub,	„	„	27th Regt. N. I., ...	No report received.
134	Luthfoola Khan, ...	„	„	Charity Hospital, Saugor,.....	Good and attentive.

J. FORSYTH, *Surgeon*
Secy. Medical Board.

Appendix B. No. IV.

Return of Native Doctors educated in the Military Class of the Medical College, for the year 1849.

Fort William, Medical Board Office, 30th March, 1850.

No.	Names.	Date of Rank.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
1	Mahomed Hossain, ...	3rd Nov. 1841,	29th Regt. N. I., Noorpoor, ...	Very good.	
	Mahomed Cassim Alli,	„ „	8th Regt. Irregular Cavalry, Sultanpore Benares, ...	Good.	
	Fyzollah Khan, ...	„ „	67th Regt. N. I., Dinapore ...	Good.	
	Alli Bux, (2nd) ...	„ „	11th Regt. Light Cavalry, Umballa, ...	Good.	
5	Bux Khan, ...	„ „	72nd Regt N. I., Bareilly, ...	Good.	
	Chunder Deen Sukull,	„ „	Garrison of Agra, ...	Good.	
	Alli Bux, (1st,) ...	„ „	Civil Station, Budruck, ...	No report received.	
	Mozuffer Hossein, ...	„ „	9th Light Cavalry, Neemuch, ...	Very attentive and well informed.	
	Jelall Ooddeen, ...	„ „	24th Regt. N. I., Gorruckpore,	Good.	
10	Shaikh Mungloo, ...	„ „	Army, Head Quarters, ...	No report received.	
	Odhin Sing, ...	20th June 1842,	4th Light Cavalry, Wuzerabad,	No report received.	
	Kundy Sing, ...	„ „	Detachment 2nd Assam Light Infantry, Battalion Tezpore, ...	Attentive.	
	Summon Khan, ...	„ „	1st Irregular Cavalry, Neemuch,	Well qualified and attentive.	
	Hingun, (2nd,) ...	„ „	8th Regt. Irregular Cavalry, Sultanpore Benares, ...	Good.	
15	Meer Caussem Alli, ...	„ „	28th Regt. N. I., Hooshearpoor,	Good.	
	Cally Persaud, ...	„ „	31st Regt. N. I., Jullunder, ...	....	On leave.
	Golam Rujub, ...	„ „	52nd Regt. N. I., Ferozepore, ...	Both excellent.	

	Meer Golam Shaw, ...	„ „	Jeypore Political Agency, Neemuch, ...	Good.	
	Ghassy Khan, ...	„ „	Jail Hospital, Saugor, ...	Good and well qualified.	
20	Meerza Bauker Hossain,	„ „	11th Regt. Light Cavalry, Umballa, ...	Good.	
	Oaheed Allee, ...	„ „	37th Regt. N. I., Lahore, ...	No report received.	
	Abdool Wahid, ...	„ „	5th Regt. N. I., Dinapore, ...	No report received.	
	Shaikh Elahee Bux, ...	22nd Dec. 1842,	Detachment, Sylhet Light Infantry Battalion, Cachar, ...	Satisfactory.	
	Hedyat Oollah, ...	„ „	45th Regt. N. I., Punjaub, ...	No report received.	
25	Torab Ally, ...	„ „	16th Regt. N. I., Barrackpore,—	....	Discharged from the service at his own request G. O. C. C. 14th July 1849.
	Hingun, (1st) ...	„ „	Head Quarters, Sylhet Light, Infantry Battalion, Cherra, ...	Satisfactory.	
	Shaikh Abdoollah, ...	„ „	Ramghur Light Infantry Battalion, Doorundah, ...	Good and attentive.	
	Seetul Sing, ...	9th June 1843,	2nd Assam Light Infantry Battalion, Gowahatty, ...	Very Good.	
	Essory Lall, ...	„ „	Jail, Nursingpore, ...	Satisfactory.	
30	Ghunsam Sing, ...	„ „	70th Regt. N. I., Peshawur, ...	Good.	
	Khandam Hossein, ...	„ „	Station Hospital, Darjeeling, ...	Very good.	
	Sooltan Khan, ...	„ „	Foot Artillery, Lahore, ...	....	Dismissed the service by G. O. C. C. 4th Dec. 1849.
	Bissessor Sing, ...	„ „	Civil Station, Bauliah, ...	Well behaved and very attentive.	
	Sahebdad Khan, ...	„ „	56th Regt. N. I., Lahore, ...	Good.	
35	Mendhy Khan, ...	„ „	2nd Regt. N. I. Grenadier, Rawal Pindee, ...	Very good.	

No.	Names.	Date of Rank.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
36	Jhoomuck Lall, ...	8th Sept. 1843,	With the Deputy Collector, Bhaugulpore, ...	Good.	
	Oozeer Khan, ...	„ „	Buheree Dispensary, ...	No report received.	
	Bhowanee Sing, ...	„ „	1st Regt. Seik Local Infantry, Hooshearpore, ...	Good.	
	Hedyat Alli Khan, ...	14th June 1844,	Commissioner's Establishment, Gowahatty, ...	Good and ordinary.	
40	Ramdhone, ...	„ „	64th Regt. N. I., Allahabad, ...	Both creditable.	
	Meer Akbur Alli, ...	„ „	Ex-Ameers of Scinde, Hazareebaugh, ...	No report received.	
	Hossain Bux, ...	„ „	Civil Station, Maunbhoom, ...	Good.	
	Mirza Hossain Bux, ...	„ „	58th Regt. N. I., Lahore, ...	Good.	
	Meer Rujub Alli, ...	„ „	Jail, Mymensing, ...	Satisfactory.	
45	Meer Alli Bux, ...	„ „	15th Regt. N. I., Umballa, ...	Attentive.	
	Moshaeb Alli, ...	„ „	3rd Regt. N. I., Hooshearpore,	Good.	
	Shaikh Yar Alli, ...	28th March 1845,	70th Regt. N. I., Dacca, ...	No report received.	
	Luchmun Sing, (1st,)...	„ „	8th Battalion Artillery, Cawnpore, ...	Satisfactory.	
	Shaikh Matuboodeen, ..	„ „	2nd Seik Light Infantry, Kangra,	Good.	
50	Shaikh Meah Jan, ...	„ „	4th Company 6th Battalion Artillery, ...	No report received.	
	Shaikh Emam Alli, ...	„ „	13th Regt. N. I., Punjaub, ...	No report received.	
	Shaikh Ilahee Bux, (1st,)	„ „	60th Regt. N. I., ...	No report received.	
	Doorga Churn Lall, ...	„ „	13th Regt. Irregular Cavalry, ...	Highly satisfactory.	
	Shaikh Hossein Alli, ...	„ „	Under Captain. Hill, Trigonometrical Survey, ...	No report received.	
55	Shaikh Khoda Bux, ...	„ „	12th Regt. N. I., ...	Satisfactory.	
	Punna Lall, ...	„ „	Civil Doorundah, ...	Good and attentive.	

	Ulleef Khan, ...	„	„	Arracan Local Battalion, Akyab,	Good, and a good Surgical man.
	Ramsahae Lall, ...	„	„	48th Regt. N. I., Benares, ...	Good.
	Mahomed Khan, ...	„	„	Civil, Hazareebaugh, ...	Good.
60	Warris Ally, ...	23rd Jany.	1846,	Sappers and Pioneers, Loodiana,	Good and satisfactory.
	Ushruf Ally Khan, ...	„	„	16th Irregular Cavalry, Loodiana,	Good.
	Shaikh Abdoolla, ...	„	„	Hurreanah Light Infy., Hansie,	Good.
	Meer Akbur Ally, ...	„	„	4th Regt. Seik Local Infantry, Loodianah, ...	Satisfactory.
	Syad Mahomed Waheed Ushruff, ...	„	„	4th and 7th Companies Sappers and Pioneers, ...	No report received.
	Wuzeer Khan, (1st,) ...	„	„	6th Regt. Light Cavalry, Meerut,	Attentive.
65	Khosal Ram, ...	„	„	Jail, Agra, ...	Satisfactory.
	Meer Bundah Ally, ...	„	„	Jail, Futtyghur, ...	Good.
	Shaikh Lall Mahomed,	„	„	Residency, Katmandoo, ...	Good.
	Wuzeer Khan, (2nd,)...	„	„	19th Regt. N. I., Lahore, ...	Very good.
	Shaikh Ruheem Buksh,	„	„	46th Regt. N. I., Loodianah, ...	Good.
70	Choonee Lall, ...	„	„	14th Regt. Irrg. Cavy., Hooshearpore, ...	Conduct of late not so good and qualifications inferior.
	Shaikh Souban Ally,...	„	„	10th Regt. N. I., Lucknow, ...	Improving.
	Shaikh Nubbee Buksh,	„	„	Medical duties, Simla, ...	No report received.
	Shaikh Emam Ally, ...	„	„	Jail, Hooshearpore, ...	Good.
75	Abdool Summeed, ...	„	„	Station Hospital, Ferozepore, ...	Good.
	Hingun Khan, ...	„	„	1st Regt. N. I., Jullunder, ...	Good.
	Baboo Ram, ...	„	„	Governor Genl.'s Body Guard,	Good.
	Luchmun Singh, ...	„	„	3rd Co., 7th Bn. Artillery, ...	No report received.
	Jowahur Lall, ...	„	„	Commr. and Supt's. Estab., Sutlege States, ...	No report received.
80	Shaik Alli Buksh (1st,)	„	„	Unknown, ...	No report received.
	Fyzoollah Khan, ...	„	„	Foot Artillery, Lahore, ...	Good.
	Shaik Faqueer Mahomed, ...	„	„	34th Regt. N. I., Wuzeerabad,...	Good and attentive.
	Wuzeer Alli Khan, (3d,)	„	„	37th Regt. N. I., Lahore, ...	No report received.

No.	Names.	Date of Rank.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
84	Meerza Nourez Beg, ...	23rd Jan. 1846,	72nd Regt. N. I., Bareilly, ...	Indifferent.	
85	Meer Hyder Alli, ...	30th „	Regiment of Loodiana, Cawnpore,	Attentive.	
	Shaik Alli Mahomed,...	9th April 1847,	23rd Regt. N. I., Wuzeerabad,...	Good.	
	Sunt Persaud Sing, ...	„ „	Dett. Kamaon Lt. Battn. Lohorghaut, ...	Improving and tolerable.	
	Shamut Oollah, ...	„ „	4th Troop 3rd Battalion Horse Artillery, ...	No report received.	
	Ushruff Alli Khan, ...	„ „	Station Nynee Tal, ...	Good.	
90	Mirza Ramzan Alli, ...	„ „	Station Hospital, Umballa, ...	Good,	
	Ameer Khan, ...	„ „	Station Hospital, Dugshaie, ...	No report received.	
	Meer Enayut Alli, ...	„ „	Civil Station, Patna, ...	Diligent and attentive.	
	Pursun Lall, ...	„ „	Nusserie Rifle Battalion, Jutog,	Well disposed and improving.	
	Shaikh Alli Buksh, ...	„ „	50th Regt. N. I., Delhie, ...	Good.	
95	Meer Enayut Hossein,	„ „	7th Regt. N. I., Loodiana, ...	Satisfactory.	
	Shaikh Mohomed Hossein, ...	„ „	2nd Regt. Irregular Cavalry, Peshawar, ...	Good.	
	Shaikh Kurreem Udin,	„ „	2nd Regt. Sheik Local Infantry, Kangra, ...	Good.	
	Shaikh Mashoom, ...	„ „	9th Battalion Artillery, ...	No report received.	
	Shaikh Kulleem Oollah,	„ „	39th Regt. N. I., ...	Good.	
100	Shaikh Soopum, ...	„ „	....	....	Died 26th March 1849,
	Shaikh Kurreem Buksh,	„ „	9th Regt. N. I., ...	Good.	
	Shaikh Emam Alli, ...	„ „	Native Garrison Hospital, Chunar, ...	Good.	
	Wuzeer Alli Khan, ...	„ „	Jail, Mundlaisir, ...	Intelligent and attentive.	
	Lalla Ramdyal, ...	„ „	40th Regt. N. I., Barrackpore,...	Satisfactory.	

105	Shaikh Abdool Ajuz, ...	„ „	Civil Station, Jessore, ...	Good.
	Shaikh Kurreem Buksh, (2nd,) ...	14th April 1848,	67th Regt. N. I., Dinapore, ...	Good.
	Mirza Mohomed Jaun,...	„ „	Station, Mussoorie, ...	No report received.
	Meer Hedyut Alli, ...	„ „	47th Regt. N. I., Cawnpore, ...	Good and attentive.
	Shaikh Elahee Bux, (1st)	„ „	Regt. of Loodiana, ...	Attentive.
110	Shaikh Kurreem Bux, (1st,) ...	„ „	9th Regt. N. I. ..	No report received.
	Shaikh Shair Alli, ...	„ „	65th Regt. N. I., Benares, ...	Good.
	Fyzoolla Khan, ...	„ „	8th Regt. Light Cavalry, Ferozepore, ...	Good.
	Emdad Hossein, ...	„ „	Harowtee Political Agency, ...	Careless and inexperienced.
	Myboob Khan, ...	„ „	Station Hospital, Benares, ...	Good.
115	Abdool Hossein, ...	„ „	Station Hospital, Dinapore, ...	Good.
	Syud Abdool Onahud,...	„ „	61st Regt. N. I., Govindghur, ...	Satisfactory.
	Shaikh Mungloo, ...	„ „	35th Regt. Light Infantry, Barrackpore, ...	Careless and inattentive.
	Khajah Hingun, ...	„ „	2nd Regt. Irregular Cavalry, Peshawar, ...	Good.
	Abdoola Khan, ...	„ „	Wing 55th Regt. N. I., Nagode,	Good and qualified.
120	Saduck Alli Khan, ...	„ „	Civil duties, Shopoora, ...	Middling.
	Mahomed Ufzul, ...	„ „	40th Regt. N. I., Barrackpore,...	Satisfactory.
	Shaikh Sahadut, ...	„ „	1st Troop 1st Battalion Horse Artillery, Wuzeerabad, ...	Good.
	Bakur Khan, ...	„ „	2nd Company 7th Battalion Artillery, Jhelum, ...	Good.
	Jahur Ul Huq, ...	„ „	13th Regt. Irregular Cavalry,...	Satisfactory.
125	Khoseal Ram, ...	„ „	Nusseerie Battalion, ...	No report received.
	Mirza Kudrut Alli, ...	„ „	Jail and Civil Station, Kangra,...	Very good.
	Ruhmuth Alli, ...	„ „	With Captain J. S. DuVernet's party, Great Trigonometrical Survey, Deyrah, ...	No report received.
	Shaikh Abdul Ouahub,	„ „	Jail, Govindghur, ...	Good.

No.	Names.	Date of Rank.	Corps and Stations to which attached.	Character and Qualifications.	Remarks.
129	Luthfoola Khan, ...	9th April 1847	3rd Light Cavalry, Nowgong, ...	No report received.	
130	Dyah Sing, ...	7th April 1849,	Head Quarters 1st Assam Light Infantry Battalion, Debrooghur, ...	Attentive and intelligent.	
	Nujux Alli, ...	„ „	Bhopal Contingency, ...	Good.	
	Romee Khan, ...	„ „	With the Estab. of Great Trigonometrical Survey, ...	No report received.	
	Shaik Ramzan Alli, (3rd) ...	„ „	Civil Station, Kyook Phyoo, ...	Indifferent and mediocre.	
	Nusseeb Khan, ...	„ „	38th Regt. Light Infantry, Lucknow, ...	Promising.	
135	Shaikh Jaun Alli, ...	„ „	48th Regt. N. I., Banda, ...	Satisfactory.	
	Sadoolla Khan, ...	„ „	9th Battalion Artillery, Dum Dum, ...	Attentive.	
	Ukbur Alli, ...	„ „	Jail Hospital, Tezpore, ...	Attentive.	
	Mungul Sing, ...	„ „	2nd Assam Light Infantry Battalion, Gowahatty, ...	Very good.	
	Shaikh Atta Hossein,...	„ „	16th Regt. N. I., Grenadiers, ...	No report received.	
140	Meer Jafur Alli, ...	„ „	65th Regt. N. I., Benares, ...	Good.	
	Shaikh Ramzan Alli, (1st,) ...	„ „	Deccan Road, ...	No report received.	
	Shaikh Alli Oollah, ...	„ „	Joudpore, Legion, ...	No report received, ...	Joined 10th December 1849.
	Shaikh Ramzan Alli, (2nd,) ...	„ „	41st Regt. N. I., Mooltan, ...	Good.	
145	Meer Keramuth Alli, ...	„ „	47th Regt. N. I., Cawnpore, ...	No report received.	
	Dursun Loll, ...	„ „	Civil Station, Kishnaghur, ...	Good.	
	Mirza Rajah Alli Beg,	„ „	Civil Station and Jail, Shaikpoorah, ...	Good.	

	Syed Unwar Alli, ...	„	„	Joudpore Legion, ...	No report received, ...	Joined 23rd November 1849.
	Shaikh Kurreem Bux,...	„	„	Garrison, Allahabad, ...	Good.	
	Kadum Alli Khan, ...	„	„	Ferozepore Regt., Agra, ...	Good.	
150	Meer Ahmud Alli, ...	„	„	5th Company 7th Battalion Artillery, ...	No report received.	
	Emdad Khan, ...	„	„	45th Regt. N. I., Umballa, ...	Good.	
	Meer Zoolfigur Alli, ...	„	„	Staff Hospital, Meerut, ...	Steady and attentive.	
	Syed Emam Alli, ...	„	„	Hurrianah Light Infantry Battalion, Hansie, ...	Good.	
	Shaikh Rohim Bux, ...	„	„	11th Irregular Cavalry, Hansie, .	Good.	
155	Saduck Hossein, ...	„	„	....	....	Struck off,—deceased—May 1849, at Allahabad, in progress to Upper Provinces.
	Abdool Gufoor, ...	„	„	Dispensary, Hooshearpore, ...	Good.	
	Mahomed Hossein Khan,	„	„	Jail and Civil Station, Lahore,...	Good.	
	Bhikoo Sing, ...	„	„	Trigonometrical Survey, ...	No report received.	
	Shaikh Abfooddin, ...	„	„	Civil Station Jail, Shaikpoorah,	Good.	
160	Emam Bux, ...	„	„	33rd Regt. N. I., Neemuch, ...	No report received.	
	Gowry Sunker, ...	„	„	Superintendent Commissioner, Sutlege States, ...	Attentive.	
	Bhowaneedeen Tewarry,	31st Oct. 1849,		Placed at the disposal of the Board of Administration, Lahore, ...	No report received.	
	Madary Sing, ...	„	„	„ „	No report received.	
	Ahmed Yar Khan, ...	„	„	„ „	No report received.	
165	Kadur Buksh Khan, ...	„	„	„ „	No report received.	
	Mirza Hingun, ...	„	„	„ „	No report received.	
	Shaikh Usgur Alli, ...	„	„	„ „	No report received.	
	Shaikh Nubee Buksh,...	„	„	„ „	No report received.	
	Choonee Lall, ...	„	„	„ „	No report received.	
170	Meer Dedar Buksh, ...	„	„	„ „	No report received.	

No.	Names.	Date of Rank.	Corps and Stations to which attached.	Character and qualifications.	Remarks.
171	Shaikh Mohomeuksh, ...	31st October 1849.	Placed at the disposal of the Board of Administration, Lahore, ...	No report received.	
	Shaikh Kymoodeen, ...	" "	" "	No report received.	
	Meer Hyder Alli, ...	" "	" "	No report received.	
	Shaikh Abdool Wahub,	" "	Sudder Hospital, Akyab, ...	No report received, ...	Arrived at Akyab, 14th Nov. 1849.
175	Prem Chand, ...	" "	Placed at the disposal of the Board of Administration, Lahore, ...	No report received.	
	Sewrakhan Dobay, ...	" "	" "	No report received.	
	Shaikh Fukroodeen, ...	" "	" "	No report received.	
	Sobhan Khan, ...	" "	" "	No report received.	
	Shaikh Fyzoollah, ...	" "	" "	No report received.	
180	Shaikh Golam Gouse,...	" "	" "	No report received.	
	Ameer Hossein, ...	" "	" "	No report received.	
182	Shaikh Oozeer Alli, ...	" "	" "	No report received.	

J. FORSYTH, *Surgeon,*
Secy. Medical Board.

(True Copy) FRED. J. MOUAT, M. D., *Secretary,*
Council of Education.

Appendix C. No. I.

List of Students for Final Examination in the Medical College Session, 1849-50.

Number.	Names.	Age.	Caste.	Date of Admission.	No. of times absent since their admission.	Remarks.
1	Sreenath Mookerjee 1st,.. ..	22	Brahmin,	1st Feb. 1844,	10 days,	Clinical Clerk 6 mths. and Dresser 6 mths. Midwifery Hospl. 8 mths. gained 1 Gold Medal.
2	Bholanath Doss, ..	23	Barber,	1st March 1845,	9 days,	Clinical Clerk 8 mths. and Dresser 6 mths. Midwifery Hospl. 8 mths. gained 2 Gold and 1 Silver Medal.
3	Sreenath Mookerjee 2nd, ..	23	Brahmin,	Ditto, ...	16 days,	Clinical Clerk 3 mths. and Dresser 6 mths. Midwifery Hospl. 2 mths. gained 2 Gold Medals.
4	Bukshiram, ...	26	Ditto, ..	Ditto, ...	4 days,	Clinical Clerk 14 mths. and Dresser 6 mths. Midwifery Hospl. 3 mths.
5	Madhub Lall Shome,	22	Koysto,	1st Augt. 1845,	13 days,	Clinical Clerk 12 mths. and Dresser 6 mths. Midwifery Hospl. 3 mths. gained 1 Gold Medal and Col. prize.
6	J. Kearney, ...	21	Christian,	2nd Jany. 1845,	18 days,	Clinical Clerk 10 mths. and Dresser 6 mths. Midwifery Hospl. 3 mths. gained 1 Gold Medal and Col. prize.
7	J. W. Brechman, ..	21	Ditto, ..	20th June 1845,	30 days,	Clinical Clerk 8 mths. and Dresser 6 mths. Midwifery Hospl. 3 mths. gained.
8	J. W. Marganont, ..	21	Ditto, ..	Ditto, ...	20 days,	Clinical Clerk 10 mths. and Dresser 4 mths. Midwifery Hospl. 3 mths. gained.
9	J. J. Durant, ...	20	Ditto, ..	Ditto, ...	38 days,	Clinical Clerk 12 mths. and Dresser 4 mths. Midwifery Hospl. 3 mths. gained 1 Gold Medal.
10	C. Raddock, ...	20	Ditto, ..	2nd Augt. 1845	18 days,	Clinical Clerk 12 mths. and Dresser 9 mths. Midwifery Hospl. 3 mths. gained Dressers' prize.

Medical College, the 6th March, 1850.

Fred. J. Mouat, M. D.,
Secretary.

No. II.

Result of the Final Examination of the Students of the Medical College Session, 1849-50.

Number.	Names.	Written Examination.	Practical Surgery.	Medicine.	Surgery.	Midwifery.	Medical Jurisprudence.	Remarks.
1	Sreenath Mookerjee, 1st., ..	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
2	Bholanath Doss, ...	Qualified,	Qualified,	Not qualified,	Qualified,	Qualified,	Qualified,	Qualified.
3	Sreenath Mookerjee, 2nd.,..	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
4	Bukshi Ram, ...	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
5	Madhub Loll Shome,.. ..	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
6	J. Kearney,.	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
7	J. W. Brechman,..	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
8	J. W. Marganont, ...	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
9	J. J. Durant,..	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.
10	C. Raddock,..	Qualified,	Qualified,	Qualified, ..	Qualified,	Qualified,	Qualified,	Qualified.

(Signed) J. Forsyth,
Examiner.

(True Copy) Fred. J. Mouat, M. D.,
Secretary.

Fort William, 25th March, 1850.

No. III.

List of Student Apprentices for final Examination in the Medical College, Session 1849-50.

Number.	Names.	Age.	Date of Admission.	No. of times absent since their Admission.	Clinical Clerk.	Dresser.	Remarks.
1	Christopher Doyle, ...	18	15th June 1848,	11 days,	5	3	
2	William Byrns, ...	21		8 days,	5	2	
3	Samual Turvey,.....	22		8 days,	5	2	
4	R. D. Logg, ...	20		9 days,	7 Months,..	4 Months.	
5	J. E. Harrison, ...	20		11 days,	5	3	
6	J. J. O'Brien,.....	22		12 days,	5	2	
7	L. A. Sakes, ...	25	4th Nov. 1848,	5 days,	5	5	

Fred. J. Mouat, M. D.,
Secretary.

Medical College, 27th March, 1850.

No. IV.

Result of the Examination of the Student Apprentices in the Medical College, Session 1849-50.

Number.	Names.	Anatomy.	Chemistry.	Materia Medica.	Medicine.	Surgery.	Remarks.
1	Christopher Doyle,	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
2	William Byrns, ...	Not Qualified,	Not Qualified,	Not Qualified,	Qualified, ...	Qualified, ...	Rejected.
3	Samual Turvey, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
4	R. D. Logg,.....	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
5	J. E. Harrison, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
6	J. J. O'Brien, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
7	L. A. Sakes, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.

Fred. J. Mouat, M. D.,

Medical College, 25th March, 1850. *Secretary.*

No. V.

List of first class Students of the Military Class for final Examination in the Medical College, Session 1849-50.

Number.	Names.	Date of admission.	No. of times absent, &c., during the year.				Duties performed by them as Dressers in Hospital and Out-Door Dispensary.	General Character.	Remarks.
			Absent.	Sick.	Leave.	Total.			
1	Shaik Asgur Alli, ...	Aug. 1846,	...	...	...	...	4 Mths. 8 Mths.	Good.	
2	Shaik Subratee, ...	April 46,	...	...	...	...	4 Mths. 8 Mths.	Good.	
3	Shaik Nubee Bux, ...	April 46,	2	1	...	3	4 Mths. 7 Mths.	Good.	
4	Choonee Loll,...	April 46,	...	...	...	...	13 Mths. 10 Mths.	Good.	
5	Meer Dedar Bux, ...	Aug. 46,	...	...	...	...	6 Mths. 6 Mths.	Good.	
6	Shaik Mahomed Bux, ...	April 46,	...	3	...	3	4 Mths. 9 Mths.	Good.	
7	Shaik Kymoodeen, ...	Aug. 46,	...	1	2	3	2 Mths. 10 Mths.	Good.	
8	Shaik Abdool Rohoman, ...	Aug. 46,	...	...	...	..	2 Mths. 8 Mths.	Fair.	
9	Meer Hyder Alli, ...	Aug. 46,	4	1	...	5	4 Mths. 11 Mths.	Fair.	
10	Kader Bux Khan, ...	April 47,	...	...	...	...	2 Mths. 11 Mths.	Good.	
11	Shaik Abdool Ouahub, ...	April 46,	...	...	...	...	10 Mths. 3 Mths.	Good.	

Number.	Names.	Date of admission.	No. of times absent, &c., during the year. Absent.	Sick.	Leave.	Total.	Duties performed by them as Dressers in Hospital and Out-Door Dispensary.	General Character.	Remarks.
12	Madary Sing, ...	April 47,	...	...	...	...	.....	Excellent.	
13	Prem Chand, ...	April 47,	...	...	...	...	12 Mths. 3 Mths.	Excellent.	
14	Sewrakhan Dobay, ...	April 47,	...	...	...	...	4 Mths. * 8 Mths.	Excellent.	
15	Shaik Fukroodeen, ...	April 47,	...	...	...	...	18 Mths.	Excellent.	
16	Sobhan Khan,.....	May 47,	..	6	...	6	4 Mths. 5 Mths.	Good.	
17	Shaik Suffer Alli, ...	May 47,	...	2	...	2	4 Mths. 7 Mths.	Good.	
18	Mirza Hingun, ...	May 47,	...	...	...	...	4 Mths. 3 Mths.	Good.	
19	Hormuth Khan, ...	May 47,	...	...	...	...	4 Mths. 4 Mths.	Good.	
20	Ahmud Khan, 1st, ...	April 48,	...	...	...	...	2 Mths. 3 Mths.	Good.	
21	Sadoollah Khan, ...	April 48,	...	...	...	...	2 Mths. 3 Mths.	Good.	
22	Bhowaneedeen Tewary, ...	April 48,	...	..	...	...	2 Mths. 3 Mths.	Excellent.	
23	Ahmud Khan, 2nd, ...	April 48,	...	...	...	...	2 Mths. 3 Mths.	Good.	
24	Shaik Fyzoollah, ...	April 48,	...	...	...	...	2 Mths. 9 Mths.	Excellent.	
25	Shaik Golam Gousee, ...	May 47,	...	...	...	...	4 Mths. 8 Mths.	Good.	
26	Ahmud Yar Khan, Free, ...	May 47,	...	...	...	...	6 Mths. 5 Mths.	Good.	
27	Ameer Hossain, Free, ...	May 47,	...	...	...	...	4 Mths. 7 Mths.	Fair.	
28	Wuzeer Alli, Assamese, Assam Student, ...	May 47,	...	...	...	...	7 Mths. 9 Mths.	Fair.	

* Female Hospital.

Medical College, 22nd October, 1849.

Fred. J. Mouat, M. D., *Secretary.*

No. VI.

Result of the Final Examination of Students of the Military Class of the Medical College, Session 1849-50.

Number.	Names.	Subject of Examination.				Remarks.
		Anatomy and Physiology, Practical and vivâ voce.	Surgery, Practical and Oral.	Medicine.	Materia Medica and Chemistry.	
1	Shaik Usgur Alli, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
2	Shaik Shubratee, ...	Qualified, ...	Qualified, ...	Not qualified, ...	Not qualified,...	Rejected.
3	Shaik Nubee Bux, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
4	Chunee Loll, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
5	Shaik Dedar Bux,...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
6	Shaik Mahomed Bux, ...	Qualified, ...	Not qualified, ...	Qualified, ...	Qualified, ...	
7	Shaik Kymoodeen, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
8	Shaik Abdool Ruhman, ...	Qualified, ..	Not qualified, ...	Not qualified,...	Not qualified,...	Rejected.
9	Meer Hyder Alli, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
10	Kadur Bux Khan, ...	Qualified, ...	Qualified, ...	Qualified, ..	Qualified, ...	
11	Shaik Abdool Wahub, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
12	Madary Sing, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
13	Prem Chand, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
14	Sewrakhun Dobay, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
15	Shaik Fukroodeen, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
16	Sobhan Khan, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
17	Shaik Suffer Alli, ...	Not qualified, ...	Not qualified, ...	Middling, ...	Not qualified, ...	Rejected.
18	Mirza Hingun, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.

Number.	Names.	Subject of Examination.				Remarks.
		Anatomy and Physiology, Practical and vivâ voce.	Surgery, Practical and Oral.	Medicine.	Materia Medica and Chemistry.	
19	Hormuth Khan, ...	Qualified, ...	Qualified, ...	Qualified, ...	Not qualified, ...	Rejected.
20	Ahmud Khan, 1st, ...	Not qualified, ...	Not qualified, ...	Qualified, ...	Not qualified, ...	
21	Sadoolla Khan, ...	Qualified, ...	Not qualified, ...	Not qualified, ...	Qualified, ...	
22	Bhowaneedeen Tewary, ...	Qualified, . .	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
23	Ahmud Khan, 2nd, ...	Not qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Rejected.
24	Shaik Fyzoollah, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
25	Shaik Golam Gouse, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ..	
26	Ahmud Yar Khan, } Free students,	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
27	Ameer Hosein, ... }	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
28	Wuzeer Alli, Assamese, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	

Fred. J. Mouat, M. D. *Secretary.*

Medical College, 26*th October* 1849.

No. VII.

List of Final Students of the Military Class for Diploma Examination in the Medical College, Session 1849-50.

Number.	Names.	Date of Admission.	Number of times absent, &c.				Duties performed by them as Dressers.		General Character.	Remarks.
			Absent.	Sick.	Leave.	Total.	Male Hosptl.	Out Door Dispy.		
1	Shaik Subratee,...	April 1846,	...	...	...	...	4 Mths.	6 Mths.	Good, ...	
2	Shaik Ubdool Ruhman, 1st,	Aug. 46,	1	4	...	5	4 Mths.	6 Mths.	Fair, ...	
3	Shaik Allee Bux, ...	April 47,	3	11	...	14	4 Mths.	5 Mths.	Fair, ...	
4	Shaik Nooruddin, ...	April 47,	...	5	...	5	4 Mths.	5 Mths.	Good, ...	
5	Meer Ruhuth Allee, ...	April 47,	...	...	...	...	4 Mths.	5 Mths.	Fair, ...	
6	Shaik Junglee, ...	May 47,	...	2	...	2	2 Mths.	5 Mths.	Fair, ...	
7	Shaik Suffer Allee, ...	May 47,	1	8	...	9	4 Mths.	15 Mths.	Very good,	
8	Hormuth Khan,...	May 47,	3	2	...	5	4 Mths.	5 Mths.	Very good,	

Number.	Names.		Date of Admission.	Number of times absent, &c.				Duties performed by them as Dressers.		General Character.	Remarks.
				Absent.	Sick.	Leave.	Total.	Male Hosptl.	Out Door Dispy.		
9	Nezamoodin,	Assamese,	Aug. 46,	...	...	...	...	7 Mths.	7 Mths.	Fair, ...	
10	Gungapersaud,		Aug. 46,	1	4	...	5	8 Mths.	7 Mths.	Fair, ...	
11	Shaik Rujub Alli,		July 47,	...	4	...	4	2 Mths.	3 Mths.	Very good,	
12	Shaik Nooruddin,		July 47,	3	...	...	3	6 Mths.	4 Mths.	Not satisfactory,	
13	Ahmud Khan, 1st, ...		April 48,	...	...	...	...	3 Mths.	2 Mths. *6 Mths.	Very good,	
14	Sadoolla Khan, ...		April 48,	...	...	...	...	2 Mths.	2 Mths.	Good, ...	
15	Ahmud Khan, 2nd, ... Free Student.		April 48,	...	...	...	...	8 Mths.	3 Mths.	Fair, ...	
16	Nuwab Khan, ...		April 48,	10	6	...	16	.....	.....	Fair, ...	

Medical College, 9*th March* 1850.

Fred. J. Mouat, M. D., *Secretary*.

* Female Hospital.

No. VIII.

Result of the Final Examination of Students of the Military Class of the Medical College, Session 1849-50.

Number.	Names.	Subjects of Examination.				Remarks.
		Anatomy and Physiology Practical and vivâ voce.	Surgery: Practical and Oral.	Medicine.	Materia Medica and Chemistry.	
1	Shaik Subratee, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
2	Shaik Abdool Ruhman, 1st, ...	Qualified, ...	Not Qualified,...	Not Qualified,...	Not Qualified,...	Remanded.
3	Shaik Alli Bux, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	Passed.
4	Shaik Nooruddeen, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	
5	Meer Ruhuth Allee, ...	Qualified, ...	Not Qualified,...	Not Qualified,...	Not Qualified,...	Remanded.
6	Shaik Junglee, ...	Qualified, ...	Qualified, ...	Not Qualified,...	Qualified,	
7	Shaik Suffer Allee,...	Qualified, ...	Qualified, ...	Not Qualified,...	Qualified,	
8	Hormuth Khan,...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	Passed.
9	Nezamoodeen, (Assamese)	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	
10	Gungapersaud, (Assamese)	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	
11	Shaik Rujub Allee, (Assamese)	Qualified, ...	Not Qualified,...	Qualified, ...	Qualified,	
12	Shaik Nooruddin, (Assamese)	Not Qualified,...	Not Qualified,...	Not Qualified,...	Not Qualified,	Recommended for removal.
13	Ahmud Khan, 1st,...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	
14	Sadoola Khan, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	Passed.
15	Ahmud Khan, 2nd,...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified,	
16	Nuwab Khan, ...	Qualified, ...	Not Qualified,...	Qualified, ...	Qualified,	

Medical College, 5th April 1850.

Fred. J. Mouat, M. D., *Secretary.*

No. IX.

List of Students for the 1st *Pass or Diploma Examination in the Medical College, Session* 1849-50. *held in October* 1849.

Number.	Names.	Age.	Caste.	Date of Admission.	Number of times absent since their admission.	Remarks.
1	SreenathMookerjees,(1st)5th year,	22	Brahmin, ...	1st Feby. 1844,	10 days,	Clinical Clerk 6 months and Dresser 6 months, Midwifery Hospital 8 months, gained 1 Gold Medal.
2	Bholanath Doss, ...	23	Barber, ...	1st March 1845,	9 days,	Clinical Clerk 8 months and Dresser 6 months, Midwifery Hospital 8 months, gained 2 Gold and 1 Silver Medal.
3	Chunder Coomar Bose, ...	22	Koysto, ...	„ ...	55 days,	Clinical Clerk 4 months. Hospital.
4	Omes Chunder Mitter, ...	22	„ ...	„ ...	7 days,	Clinical Clerk 4 months and Dresser 3 months, Midwifery Hospital 3 months, gained 1 Silver Medal.
5	Sreenath Mookerjee, (2nd,) ...	23	Brahmin, ...	„ ...	16 days,	Clinical Clerk 3 months and Midwifery Hospital 2 months, gained 2 Gold Medals.
6	Buxiram, ...	26	„ ...	„ ...	4 days,	Clinical Clerk 14 months and Dresser 6 months, Midwifery Hospital 3 months.
7	Madhub Lall Shome, ...	22	Koysto. ...	1st Aug. 1845,	13 days,	Clinical Clerk 12 months and Dresser 6 months, Midwifery Hospital 3 months, gained 1 Gold Medal and Clinical prize.

8	J. Kearney, ...	21	Christian,...	2nd Jany. 1845,	18 days,	Clinical Clerk 10 months and Dresser 6 months, gained 1 Gold Medal.
9	J. W. Brechman, ...	21	„ ...	20th June 1845,	30 days,	Clinical Clerk 8 months and Dresser 6 months.
10	J. W. Margamont, ...	21	„ ...	„ ...	20 days,	Clinical Clerk 10 months and Dresser 4 months, Midwifery Hospital 3 months.
11	J. J. Durant, ...	20	„ ...	„ ...	38 days,	Clinical Clerk 12 months and Dresser 4 months, gained 1 Gold Medal.
12	C. Raddock, ...	20	„ ...	2nd Aug. 1845,	18 days,	Clinical Clerk 12 months and Dresser 9 months, gained Dressers' Prize.
13	Bissonath Goopta, ...	22	Boido, ...	17th March 1845,	49 days,	Clinical Clerk 7 months and Dresser 2 months, Midwifery Hospital 2 months.
14	Mutty Lall Goopta, ...	23	„ ...	„ ...	56 days,	Clinical Clerk 6 months and Dresser 3 months.
15	Grees Chunder Paulit, ...	23	Koysto, ...	„ ...	23 days,	Clinical Clerk 6 months and Dresser 4 months, Midwifery Hospital 6 months.
16	Gopaul Chunder Chuckerbutty,	24	Brahmin, ...	„ ...	26 days,	Clinical Clerk 3 months and Dresser 4 months
17	Kong Lall Sen, ...	20	Boido, ...	20th June 1845,	30 days,	Clinical Clerk 8 months and Dresser 2 months, Midwifery Hospital 3 months.
18	Dinno Nath Doss, 4th year, ...	26	Barber, ...	15th July 1846,	7 days,	Clinical Clerk 6 months, gained 2 Gold Medals and Goodeve Scholarship.
19	Ameenoodin, ...	22	Mahomedan,	15th June 1846,	None,	Clinical Clerk 5 months.
20	Mahomed Jaun, ...	22	„ ..	„ ..	None,	Clinical Clerk 5½ months, gained 1 Silver Medal.
21	D. Renton, ...	21	Christian,...	July 1846,	11 days.	
22	J. Hinder, ...	18	„ ...	„ ...	16 days.	

Number.	Names.	Age.	Caste.	Date of Admission.	Number of times absent since their admission.	Remarks.
23	M. M. Gasper, ...	20	Christian,...	July 1846,...	36 days.	
24	Ahdool Humeed, (1st,) 3rd year,	22	Mohomedan.	15th Dec. 1846,	10 days,	Clinical Clerk 3 months.
25	Abdool Humeed, 2nd, ...	19	Ditto, ...	„ ...	2 days.	
26	Brindabun Chunder Chatterjee,	21	Brahmin, ...	1st May 1847,	12 days.	
27	Hossain Allee Khan, ...	23	Mahomedan,	„ ...	11 days.	
28	Sreenath Ghose, ...	21	Koysto, ...	„ ...	10 days.	
29	Ooma Churn Mullick, ...	20	.....	„ ...	12 days.	
30	Gopaul Chunder Paulick, ...	22	Rrahmin, ...	„ ...	6 days.	
31	Umbika Churn Chatterjee, ...	22	„ ...	„ ...	None.	
32	Chunder Coomar Deb, ...	21	Koysto, ...	„ ...	2 days,	Clinical Clerk 2 months.
33	Emdad Khan, ...	22	Mahomedan,	„ ...	10 days,	
34	W. E. Hannah, ...	20	Christian,...	„ ...	13 days,	Clinical Clerk 2 months.
35	A. J. Meyer, ...	20	„ ...	„ ...	7 days,	Clinical Clerk 2 months.
36	Brijonath Bundoo, ...	22	Brahim, ...	„ ...	12 days,	Clinical Clerk 2 months.
37	G. H. Daly, ...	19	Christian,...	July 1847, ..	7 days,	Clinical Clerk 2 months.
38	D. O'Brien, ...	19	„ ...	Nov. 1847, ..	16 days,	Clinical Clerk 2 months.

Fred. J. Mouat, M. D.,

Secretary.

Medical College, October 1849.

No. X.

Result of the 1*st Pass or Diploma Examination of Students of the Medical College, Session* 1849-50, *held in October*, 1849.

Number.	Names.	Subjects of Examination.				Remarks.
		Anatomy and Physiology.	Chemistry.	Botany.	Materia Medica.	
1	Sreenath Mookerjee, 1st, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	Passed.
2	Bholanath Doss, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	Passed.
3	Chunder Coomar Bose, ...	Absent, ...	Absent, ...	Absent, ...	Absent, ...	Absent—called upon to explain the cause of his absence.
4	Omes Chunder Mitter, ...	Doubtful, ...	Qualified, ...	Not Qualified,	Not Qualified,	Remanded for another session.
5	Sreenath Mookerjee, 2nd, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	Passed.
6	Buxiram, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	
7	Madhub Loll Shome, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	
8	J. Kearney, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
9	J. W. Brechman, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	
10	J. W. Margamont, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	
11	J. J. Durant, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
12	C. Raddock, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	
13	Bissonath Goopta, ...	Qualified, ...	Barely Qualified,	Not Qualified,	Not Qualified,	Remanded for another session.
14	Mutty Loll Goopta, ...	Absent, ...	Absent, ...	Absent, ...	Absent, ...	Absent—Orders as in No. 3.
15	Grees Chunder Paulit, ...	Qualified, ...	Scarcely Qualified,	Not Qualified,	Not Qualified,	Rejected, remanded for another session.
16	Gopaul Chunder Chuckerbutty,	Not Qualified,	Scarcely Qualified,	Not Qualified,	Not Qualified,	Recommended for dismissal.
17	Kony Loll Sen, ...	Qualified, ...	Qualified, ...	Not Qualified,	Not Qualified,	Remanded for another session.
18	Dinno Nath Doss, 4th,, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
19	Ameenooddeen, ...	Not Qualified,	Qualified, ...	Not Qualified,	Not Qualified,	Remanded.
20	Mahomed Jaun, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.

Number.	Names.	Subjects of Examination.				Remarks.
		Anatomy and Physiology.	Chemistry.	Botany.	Materia Medica.	
21	D. Renton, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	Remanded to study Botany another year.
22	J. Hinder, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
23	M. M. Gasper, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	Remanded to study Botany again.
24	Abdool Humeed, 1st, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	As in former case.
25	Abdool, Humeed, 2nd, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
26	Bindabun Chunder Chatterjee, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
27	Hossain Allee Khan, ...	Not Qualified,	Qualified, ...	Qualified, ...	Qualified, ...	Remanded to Anatomy and Physiology for another year.
28	Sreenath Ghose, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
29	Ooma Churn Mullick, ...	Not Qualified,	Qualified, ...	Not Qualified,	Not Qualified,	Recommended for dismissal.
30	Gopaul Chunder Pantuck, ...	Absent, ...	Absent, ...	Absent, ...	Absent, ...	Absent—Orders as in No. 3.
31	Umbika Churn Chutterjee, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
32	Chunder Coomar Deb, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
33	Emdad Khan, ...	Not Qualified,	Not Qualified,	Not Qualified,	Not Qualified,	Dismissed—good for nothing.
34	W. E. Hannah, ...	Not Qualified,	Qualified, ...	Not Qualified,	Qualified, ...	Remanded to Anatomy and Physiology
35	A. J. Meyer, ...	Qualified, ...	Qualified, ...	Not Qualified,	Qualified, ...	Remanded to Botany.
36	Brijonath Bundoo, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
37	G. H. Daly, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
38	D. O'Brien, ...	Qualified, ...	Qualified, ...	Not Qualified,	Not Qualified,	Remanded to Botany and Materia Medica.

Fred. J. Mouat, M. D.,
Secy. Medical College.

Medical Callege, 27th November, 1849.

No. XI.

List of Students for the 1st *Pass or Diploma Examination in the Medical College, Session* 1849-50, *held in March* 1850.

Numbers.	Names.	Age.	Caste or Religion.	Date of Admission.	No. of times Absent since their Admission.	Remarks.
1	Gopaul Chunder Pautuck,.....	22	Brahmin, ...	1st May 1847, ...	6	
2	Hurris Chunder Dutt, 2nd Year,	22	Koisto, ...	June 1848, ...	8	
3	Beharylol Ghose, ...	20	,, ...	,,	6	days.
4	Juggernath Sein, ...	22	Boido, ...	,,	2	
5	Ram Chunder Sein, ...	20	,, ...	,,	8	
6	Mittoonjoy Bose, ...	19	Kysto, ...	,,	none.	
7	Chunder Nath Bises, ...	19	Barber, ...	,,	3	
8	Brijonath Sircar, ...	22	Kurmokar, ...	,,	12	
9	Kylas Chunder Chatterjee, ...	20	Brahmin, ...	,,	2	days.
10	Jogendronarain Sein, ...	20	Banker, ...	,,	2	
11	Judoonauth Das, ...	21	Kybutto, ...	,,	5	
12	Nilmadhub Mookerjee, ...	22	Brahmin, ...	,,	3	
13	Nilmadhub Sein, ...	18	Boido, ...	,,	none.	
14	Dhuroonee Dhur Bose, ...	22	Koisto, ...	,,	1 day.	
15	Khetter Chunder Nundy, ...	20	Weaver, ...	,,	8	
16	Sreenath Sein, ...	21	Boido, ...	,,	18	days.
17	Dhurmodas Mookerjee, ...	19	Brahmin, ...	,,	16	

Numbers.	Names.	Age.	Caste or Religion.	Date of Admission.	No. of times Absent since their Admission.	Remarks.
18	Dwarkanath Bose, ...	19	Koisto, ...	June 1848, ...	6 } days.	
19	J. Foy, ...	17	Christian, ...	,,	3 } days.	
20	C. Foy, ...	19	Ditto, ...	,,	4 } days.	
21	Radhapersaud Sett, ...	19	Weaver, ...	,,	none.	
22	H. Renton, ...	17	Christian, ...	,,	24 } days.	
23	Doorgadas Kurr, ...	20	Koisto, ...	,,	16 } days.	
24	Gris Chunder Dutt, ...	20	Ditto, ...	,,	3 } days.	
25	Unundopersaud Naug, ...	22	Ditto, ...	,,	8 } days.	

Medical College, March 1850.

Fred. J. Mouat, M. D.
Secretary.

No. XII.

Result of the 1st Pass or Diploma Examination of the Students of the Medical College, Session 1849-50.

Number.	Names.	Anatomy and Physiology.	Botan y.	Chemistry.	Materia Medica.	Remarks.
1	Gopaul Chunder Pautuck, 3rd year, ...	Qualified, ...	Not qualified,...	Qualified, ...	Not qualified,...	Remanded for another year.
2	Hurris Chunder Dutt,...	....	....	....	....	Absent.
3	Behary Loll Ghose, ...	....	....	....	....	Absent.
4	Juggernath Sen, ...	Qualified, ...	Not qualified,...	Qualified, ...	Not qualified,...	Remanded for another year.
5	Ram Chunder Sen, ...	Qualified, ...	Not qualified,...	Qualified, ...	Not qualified,...	Remanded for another year.
6	Motoorjoy Bose, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
7	Chunder Nath Bises,.....	Not qualified,...	Not qualified,. .	Qualified, ...	Not qualified,...	Remanded for another year.
8	Brijonath Sircar, ...	....	....	....	....	Sick.
9	Koylus Chunder Chatterjee, ...	....	....	....	....	Sick.
10	Jogendronarain Sen, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified	Passed.
11	Judoonath Doss, ...	....	....	....	....	Sick.
12	Nilmadhub Mookerjee,...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
13	Nilmadhub Sen, ...	Not qualified,...	Not qualified,...	Qualified, ...	Not qualified,...	Remanded for another year.
14	Dhurronee Dhur Bose,..	Not qualified,...	Not qualified,...	Qualified, ...	Not qualified,...	Recommended for removal.

Number.	Names.	Anatomy and Physiology.	Botany.	Chemistry.	Materia Medica.	Remarks.
15	Khetter Chunder Nundy,	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
16	Sreenath Sen, ...	Not qualified,...	Not qualified,...	Qualified, ...	Not qualified,...	Remanded for another year.
17	Dhurmodoss Mookerjee,	Not qualified,...	Qualified, ...	Not qualified,...	Qualified, ...	Remanded for another year.
18	Dwarkanath Bose, ...	....	....	....	....	Absent.
19	J. Foy, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.
20	C. Foy, ...	Not qualified,...	Not qualified,...	Qualified, ...	Qualified, ...	Remanded for another year.
21	Radapersaud Sett, ...	Qualified, ...	Qualified, ...	Qualified, ...	Not qualified,...	Remanded for three months.
22	H. Renton, ...	Not qualified,...	Not qualified,...	Not qualified....	Not qualified,...	Recommended for removal.
23	Doorgadoss Kerr, ...	Not qualified,...	Qualified, ...	Qualified, ...	Qualified, ...	Remanded for another year in Anatomy and Physiology.
24	Grees Chunder Dutt, ...	Not qualified,...	Qualified, ...	Qualified, ...	Qualified, ...	" " "
25	Unnodapersaud Naug, ...	Qualified, ...	Qualified, ...	Qualified, ...	Qualified, ...	Passed.

FRED. J. MOUAT, M. D., *Secretary.*

Medical College, 1st April, 1850.

Appendix D. No. I.

Abstract of the days and hours of the various examinations of the Medical College, Session 1849-50.

Written Paper in Med. & Surgery,	Final Examination, English Class,.....	Friday, March 15th.
Practical Anatomy, ...	Test Examination, ...	„ „ „ from 10 to 4 P. M.
Midwifery, ...	„	„ „ „ „ 10 to 1 P. M.
Medical Jurisprudence, ...	„	„ „ „ „ 2 to 5 P. M.
Practical Examination in Surgery and Anatomy, ...	Final: English Class, ...	Saturday, „ 16th.
Botany, ...	Test Examination,.....	„ „ „ from 10 to 1 P. M.
Materia Medica, ...	„	„ „ „ „ 2 to 5 P. M.
Anatomy and Physiology, ...	„	Monday, „ 18th. „ 10 to 1 P. M.
Chemistry,.....	„	„ „ „ „ 2 to 5 P. M.
Medicine, ...	„	„ „ „ „ 10 to 1 P. M.
Surgery,.....	„	„ „ „ „ 2 to 5 P. M.
Medicine,.....	Final Examination, English Class,.....	Tuesday „ 19th.
Chemistry,.....	Student Apprentices' Examination,...	„ „ „
Practical Anatomy,.....	1st Pass or Diploma Examination,.....	„ „ „
Surgery (oral,).....	Final Examination, English Class,.....	Wednesday, 20th.
Materia Medica, ...	Student Apprentices' Examination,...	„ „ „
General Anatomy, (written paper,)	1st Pass or Diploma Examination,.....	„ „ „ from 10 to 1 P. M.
Descriptive Anatomy, (ditto,)	„	„ „ „ „ 2 to 5 P. M.
Botany, (Practical,).....	„	Thursday, „ 21st.
Anatomy, ...	Student Apprentices' Examination,...	„ „ „
Midwifery,.....	Final Examination, English Class,.....	Friday, „ 22nd.
Medicine, ...	Student Apprentices' Examination,...	„ „ „
Botany, (written paper,).....	1st Pass or Diploma Examination,....	„ „ „ from 10 to 1 P. M.
Chemistry,.....	„	„ „ „ „ 2 to 5 P. M.

Anatomy, ...	Hindustani Class, (Final,)	Friday, March 22nd.
Ditto,.....	„ (General,).....	Saturday, „ 23rd.
Medicine, ...	„ (Final,)	„ „ „
Materia Medica, (written paper,)...	1st Pass or Diploma Examination,.....	„ „ „ from 10 to 1 P. M.
Surgery,.....	Apprentices' Examination,.....	„ „ „
Medical Jurisprudence,.....	Final Examination, English Class,.....	„ „ „
Surgery,.....	Hindustani Class, (Final,)	Monday, „ 25th.
Chemistry & Mat. Med., (Practical,)	1st Pass or Diploma Examination,.....	„ „ „
Anatomy and Physiology,.....	Honor Examination,.....	Tuesday, „ 26th.
Materia Medica,.....	Hindustani Class, Final Examination,	„ „ „
Chemistry,.....	Honor Examination,.....	Wednesday „ 27th.
Medical Jurisprudence,.....	„	„ „ „
Botany,.....	„	Thursday, „ 28th.
Medicine,.....	„	Saturday, „ 30th.
Midwifery, ...	„	Monday, April 1st.
Materia Medica,.....	Hindustani Class, (General,)	„ „ „
Surgery,.....	Honor Examination,.....	Tuesday, „ 2nd.
Materia Medica, ...	„	Monday, „ 1st.

FRED. J. MOUAT, M. D.,
Secretary.

Medical College, 1850.

No. II.

Scheme of the Final Pass or Diploma Examinations of the Students of the English Class of the Medical College, Session 1849-50.

Subjects.	Days and Hours of Examination.	Assessors.
Written Paper on Medicine and Surgery, ...	Friday, March 15th, at 11 A. M., ...	F. P. Strong.
Practical Examination in Surgery and Surgical Anatomy, ...	Saturday, March 16th, ...	J. T. Pearson, W. Montgomerie.
Medicine, ...	Tuesday, March 19th, ...	J. T. Pearson, A. Chalmers.
Surgery, (oral examination,)	Wednesday, March 20th, ...	J. Grant, H. Chapman.
Midwifery, ...	Friday, March 22nd, ...	H. Chapman, A. Chalmers.
Medical Jurisprudence, ...	Saturday, March 23rd, ...	J. Grant, W. Montgomerie.

Council of Education, 7th March, 1850.

Fred. J. Mouat, M. D., *Secretary.*

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ANSWERS

OF THE

MOST PROFICIENT STUDENTS.

The Answers are reprinted *verbatim* from the MSS. of the students, every error of grammar and fact being retained.

Readers in Europe must remember, that the answers of the native students are not only written in a given time, but also in a foreign language, with which all of them are imperfectly acquainted when they begin the study of medicine; literary excellence, therefore, cannot be expected in them.

Appendix D. No. III.

EXAMINATIONS.

Questions for Final Students.

SURGERY.

What is an aneurism? Name the several kinds or varieties of the disease, the situations in which they most frequently occur, the diseases with which they are most liable to be confounded, and the signs by which they may be distinguished from them. Is aneurism susceptible of spontaneous cure? Mention the various artificial methods of cure that have been tried. In a case of aneurism of the *left* axillary artery of considerable size—mention the operation usually had recourse to for its cure, and describe it minutely. State the circumstances most likely to interfere with the success of the operation, and through what channel the blood is chiefly conveyed to the limb after it is completed. Detail the after treatment.

MEDICINE.

What is the pathology or rational theory of inflammation? What are the principal pre-disposing and existing causes of acute inflammation and its terminations? What are its most probable terminations with reference to the particular organs or tissues affected? Enumerate a few of the most powerful antiphlogistic remedies, and the appropriateness of each in the treatment of acute inflammation of particular organs or tissues.

Test Examinations.

CHEMISTRY.

1. Give a detail of the processes for the preparation of phosphorus, the theories of these, the properties of that substance and also the composition, modes of procuring, and properties of its compound with oxygen and hydrogen, together with their tests.
2. Give the processes and theories of them for procuring morphia, the properties of that substance and its salts, together with the tests by which it is detected.
3. What are the properties of pure water, its constituents, the modes in which these constituents are determined by composing it from them, or decomposing it into them, and what are the properties of these constituents?
4. Give the processes used in the preparation of sulphuric ether, the theory of its formation, and its properties.

SURGERY.

1. What are the different diseases and accidents which call for amputation?
2. Enumerate the different diseases of the testicle and cord, and describe how each should be treated.
3. What are the most common causes of death after the operation for stone in the bladder?

MIDWIFERY.

1. What are the constitutional and other causes of abortion? Describe the symptoms and treatment in each case.
2. What are the organs concerned in menstruation, and what is the physiology of that function?

MATERIA MEDICA.

1. Give the preparation, tests, uses, and doses of calomel.
2. Specify the medicinal substances produced by the following natural families, noting the active principles, officinal preparations, and predominant actions of each, with the particular part of the plant which yields the medicine, viz.:

Rannunculaceæ.
Liliaceæ.
Umbelliferæ.
Solaneæ.

MEDICAL JURISPRUDENCE.

1. Give the general symptoms caused by narcotic poisons, and the means of distinguishing by symptoms during life and morbid appearances after death, between the effects of opium and the various forms of apoplexy.
2. The symptoms, post mortem appearances, and treatment of poisoning by the salts of lead, with the tests for lead in solution.

Honor Examinations.

ANATOMY AND PHYSIOLOGY.

1. The structure of the white and grey substance of the cerebro-spinal axis. The structure of the ganglions of the sympathetic nerve, or for example, one of the dorsal ganglions—the structure of the nerves of animal life and of vegetative life.
2. The function of the different branches of the Pneumogastric nerve.
3. The structure and development of the placenta, and the mode in which it is connected with the uterus.
4. The structure of the Testicle and its coverings.
5. Describe the dissection requisite to display the occipital artery from its commencement to the upper margin of the occipital bone. State the relative position of the different parts as they are met with in the course of the dissection, proceeding from the surface.

6. Describe the course and distribution of the anterior branches of the sacral nerves, with the exception of the lumbo-sacral branch, and the description of the great sciatic nerve to be limited to the upper angle of the popliteal space.

7. Describe the fascia, muscles, tendons, blood-vessels, and nerves met with in the palm of the hand and fingers, stating the order and relative position in which they are found in the progress of dissection from the surface to the bones.

CHEMISTRY.

1. Specify the *classes* of processes for the production of artificial cold, the principles upon which the success of these processes depend, and the causes which prevent the attainment of greater degrees of cold than have been hitherto reached.

2. Mention the composition and properties of the most noted combinations of fluorine, and their tests.

3. How many kinds of tannic acid are there, how are they procured, what are their properties and tests?

4. What is soap, how made, what is the theory of the processes for making it, what are its properties?

5. What are the most common urinary calculi? By what tests are they distinguished from one another, and from other bodies resembling them?

6. State the properties of oxygen, the usual processes by which it is procured, the theories of them, and the tests by which it is known.

MATERIA MEDICA.

Morning Paper.

1. Detail the circumstances which modify the action of medicines on the human system.

2. What are the proofs of the absorption of medicines? Give examples.

3. What are emetics, how are they supposed to act, and into what orders are they divided? Give examples.

4. What are the chief points of importance that demand attention in prescribing medicines. 1st, as to the medicines themselves. 2ndly, as to the effects to be produced by them.

Afternoon Paper.

1. Identify the substances marked 1, 2, 3, 4, 5, 6, 7 and 8.* Mention the characteristic chemical test by which each is known.

2. Give the preparation, test, uses, and doses of nitric acid.

* The substances were—
1. Nitrate of Potash.
2. Sesqui-Carbonate of Ammonia.
3. Nitrate of Copper.
4. Nitrate of Silver.
5. Oxalic Acid.
6. Sulphate of Magnesia.
7. Iodide of Potassium.
8. Sulphate of Copper.

MEDICAL JURISPRUDENCE.

*Morning Paper.**

1. Enumerate the diseases which resemble irritant poisoning, and specify briefly the means of distinguishing the one from the other.
2. Enumerate the general characteristics of poisoning as derived from symptoms, morbid appearances, and chemical analysis.
3. Give the symptoms and treatment of poisoning by corrosive sublimate, and mention the means of distinguishing arsenical from mercurial poisoning.
4. The tests for arsenic, with the merits and defects of each.
5. Give the tests for the poisonous salts of copper, lead, and antimony.
6. The symptoms, treatment, and morbid appearances of poisoning by oxalic acid.

Afternoon Paper.

1. Give the treatment of narcotic poisoning generally, and of poisoning by opium and hydrocyanic acid in particular.
2. How would you distinguish poisoning by opium from apoplexy, and from intoxication by alcohol?
3. What are the distinctive effects of carbonic acid upon the system when it is slowly generated and largely diluted with atmospheric air, (as in the manner of burning charcoal adapted by natives to heat their houses, when closed in the cold season,) opposed to those when a person is suddenly immersed in it, as in the case of the poison valley in Java, in the Grotto del Cane in Italy, or in descending into a well in which the gas has previously accumulated?

SURGERY.

1. Describe the two forms of Erysipelas, their course and terminations, and what treatment you would adopt in each form of the disease.
2. Describe the different dislocations of the shoulder-joint and the modes of reduction.
3. Describe the operation of amputation at the shoulder-joint.
4. What are the symptons of a foreign body in the trachea? What would you do to relieve them?
5. What are the symptons of an aneurism? What may an aneurismal tumor be mistaken for? How is it to be distinguished from the diseases which resemble it?
6. How would you treat a wound of the artery at the bend of the arm occurring in venesection?

MIDWIFERY.

What are the varieties of puerperal convulsions, the symptoms, pathology, and treatment of each?

* The student to answer any three of the above questions, which he may prefer.

ANSWERS.

SURGERY.

FINAL STUDENTS.

Sir Astley Cooper defines an aneurism to be a tumor, containing blood, in direct communication with an arterial canal, and this definition appears to comprehend all the varieties of that disease; of the varieties there are two principal, viz. the *true* and *false*, at least these are enough for practical purposes. But still each of these may be subdivided.

An aneurism to be *true* should have at least one of the arterial tunics, entering into the formation of its cyst, whilst a *false* aneurism has for its cyst, (if it have one) any of the other tissues of the body, as for instance, the cyst of an abscess, the coats of a vein, organized lymph bony tissue, &c.

The sub-varieties of a *true* aneurism are—

1. That where the disease is formed by a dilatation of all the three coats of an arterial tube, hence it is called an aneurism by dilatation.

2. The sac of the aneurism may be formed by the *inner* coat alone, by the *middle* coat alone, by the *outer* coat alone, or by any *two* of the coats, as the inner and middle together, or by the outer and middle together. I have not referred to the *anatomical* division of the coats, which is said to be six, as the enumeration of three is enough for all practical purposes. This variety of the disease in which only one, or perhaps two of the coats, enter into the formation of the sac, is generally produced by rupture of a tunic, hence it is also termed *aneurism by rupture.*

3. A third variety is said to be that, in which the disease is produced at the commencement by dilatation. Subsequently one or two of the tunics give way. So that after death when the aneurism is examined, it is seen that a part of the sac is formed by all three coats and a part by one or two only.

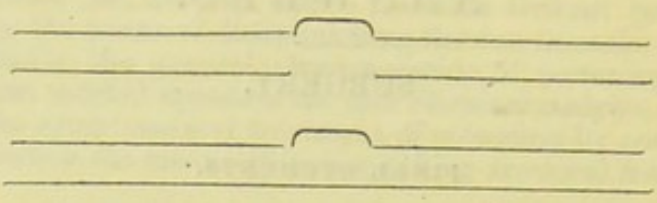
4. An aneurism is said to be *limited* or *diffused*, the former I need not define, the latter is that, which was first limited, and afterwards burst, the blood being infiltrated into the surrounding soft parts and condensing them so as to form a new sac for itself. This is very rare, for generally when an aneurism once bursts it carries off the patient at a shorter or longer interval by hemorrhage.

5. Other varieties are mentioned as, pedunculated, sacculated, fusiform, &c. depending upon the form of the aneurism—these are unimportant, except that it is worth knowing that an aneurism of the aorta may be pedunculated, i. e. narrow at its commencement and broad at its end, where it is often seated on the neck, and thus may simulate disease of the 1st portion of the carotid or subclavian.

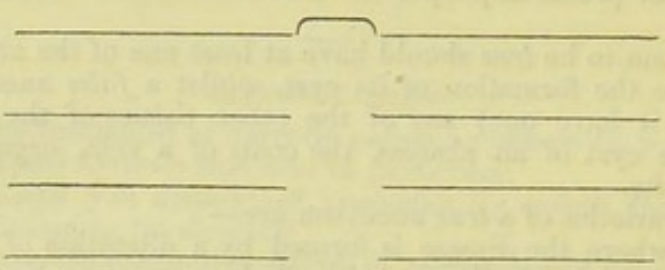
6. In the same manner as hemorrhages are divided, according to their seat so may aneurisms, as of the popliteal, femoral, &c. &c.

Of the *false*, amongst others there are four principal varieties, viz.

1. *Varicose aneurism.*—Is that in which there is a communication between an artery and a vein, but the communication is not direct, a cyst being interposed, this diagram will explain what I mean.



2. *Aneurismal Varix.*—In this the cyst of the aneurism is also formed by the vein ; but the communication between the artery and vein is direct thus



3. *Aneurism by anastomosis.*—In which the disease by an enlarged and tortuous condition of the arteries of a part, most frequently seen in the head.

4. *Erectile tumor*, in which the capillaries of a part are enlarged and run into one another. This is best known as the vascular variety of nœous or mother's *mark.*

The *situations* in which aneurisms most frequently occur are at the turning of the bloods current, viz., in the commencement of the aorta, at its ascending curve, its descending curve, at the commencement of the large branches, and in the arteria innominata, first portions of carotid and subclavian, at the head of the axilla, of the elbow, in the popliteal space, and at the dorsal artery of the foot.

The *diseases* for which an aneurism may be mistaken are in the extremities, an abscess or any other tumor situated over an artery, and receiving a pulsation ; in the trunk of the body for various diseases as chronic laryngitis, chronic bronchitis, laryngis mustridulus—any cancerous or other tumor, whether in the thorax or abdomen, enlarged gall bladder, disease of the pancreas, &c., and when it presses from within on the spine for disease of the spinal cord. An abscess or any other tumor may be *diagnosed* from an external aneurism, by the following points.

1. In the *History.* In an aneurism by rupture, the patient, Sir A. Cooper says, often suddenly feels, while he is walking along the road, as if something had burst in him, or as if a stone or a stick had struck him from behind,—this I need not say never occurs in a tumor, the commencement is generally *painless*, while an abscess is very painful, an aneurismal tumor is *soft* at first and hardens subsequently, when its sac comes to contain coagulated blood ; *vice versa* is the progress of an abscess, a tumor generally begins and continues *hard.*

2. If *pressure* be applied on the *cardiac* side of a pulsating tumor, the pulsation, the bulk and the tension, all diminish if it be an aneurism; if a tumor the pulsation only; for obvious reasons.

3. If pressure is applied on the distal side, the bulk of the aneurism is increased, not so with a tumor, but it is so with an abscess if it communicates with the arterial canal.

4. A tumor may often be *moved off* from the artery on which it lies, not so with an aneurism.

5. The *bruit de rape* and the arterial *thrill* are conjoined in an aneurism—in a tumor the bruit de rape *alone* is present.

6. You may in some cases be able, in a tumor, to trace the arterial tube throughout its whole length distinctly, you cannot do the same with an aneurism. These are I believe the most important diagnostic signs. An aneurism is susceptible of *spontaneous* cure in four ways, viz.

1. The sac of the aneurism by enlarging may fall over and press upon the cardiac end and thus obliterate the canal between the heart and the mouth of the tumor.

2. The mouth or opening of an aneurism being generally small—I have seen it of a horse hair's breadth—a clot of blood may obstruct the opening.

3. The aneurism may become gangrenous and this gangrene may be of the sthenic character, preceded by the effusion of lymph, and thus the artery obliterated and the sac removed.

4. It may become *diffuse*, the extravasated blood becoming coagulated, may press upon the arterial tube and thus *cure* itself.

The artificial methods of cure are either medical or surgical.

I. The *medical* plan consists in the following indications: reducing the quantity of blood in the system—diminishing the heart's action and reducing the excitement of the system in general—they are done, by reducing the quantity of food, the amount of drinks, and especially of stimulating drinks, the exhibition of sedatives as aconite, belladonna, digitalis, opium, &c. and by enjoining perfect quiet and rest to the individuals' body and mind.

The *surgical* treatment consists in diminishing the quantity and force of the blood to the aneurismal sac:—this is done.

1. By applying pressure to a *healthy* part of the artery situated between the heart and the disease. It may be effected either by ligature which is the means, or by simple pressure with a tourniquet or which is better by the instr ument called the *pressaire arteire*. This 1st plan is Hunter's, and is the most effectual.

2. In aneurism of the anonyma and of the 1st or 2nd portion of the left subclavian.—Where a ligature cannot be applied at the cardiac end, *Brasador* proposed to tie the artery at the distal end.

3. *Wardrop* proposed in anuerism of the anonyma—instead of tying the subclavian as is usually done, to tie the carotid, this latter being an easier operation.

The principle of the last two methods is the same as the 1st, but effected in a different way.

In aneurism of the left axillary, artery, for its cure the 3rd position of the left subclavian is tied in the following manner, I shall describe it in steps.

1. The instruments required are previously prepared: they are a good sharp scalpel, dissecting and artery forceps 2 or 3 in number—a director or two, a couple of tractors aneurismal needles of different

forms—that with a large curve preferable,—these to be armed with ligatures made of strong silk or hemp thread, and waxed strips of adhesive plaster, with hot and cold water, sponges, stimulants, &c.

2. The patient to be placed in a proper position—the sitting posture preferable to the operator, and his head turned towards the opposite side with the affected limb as much depressed as possible, and two or three assistants, the surgeon on diseased side.

3. All being ready, the surgeon presses his left hand on the skin of the chest below the clavicle with the object of making it as tense as possible, then with the scalpel in the right hand he makes an incision, right upon the clavicle, commencing at the outer border of the sterno mastoid muscle and ending at the outer border of the trapezius—this is to cut through the skin and superficial fascia; then the surgeon lets go the skin to allow it to resile above the clavicle, and another incision 2 or 3 inches in extent is made at the outer border of the trapezius: then the surgeon cautiously divides each layer, with the aid of the director until he comes on the brachial flexus, for this purpose the clavicular origin of the sterno-mastoid may be required to be divided and a few fibres of the trapezius—at this stage he should avoid the acromöal" thoracic artery which may come in his way, and he must take care not to wound the brachial plexus. Then he introduces his index finger from above downwards until it rests upon the artery known by its pulsation and elastic feel—then he tries to bring it into view, and pinches up the sheath with a forceps, just punctures it, and divides for half an inch taking express care of the vein. After this all being right he introduces the needle from below, upwards until its end with the ligature appears, he takes hold of one end of the ligature, and then cautiously removes the needle, then ties it with a reef knot *carefully*.

The difficulty in this case will be the large tumor pressing upwards the shoulder, and *depressing* very much the seat of the artery.

Then the ligature having been applied to the artery, one end of it is cut off, and the other left to remain of about 2 or 3 inches in length, the wound is wiped and sponged, and any oozing of blood stopped by cold or ligature if necessary. Then the divided skin is brought together and united by a few stitches of the interrupted suture, and a strip or two of adhesive plaster may be applied, then the limb is brought to the side of the body, the patient made comfortable and removed quietly to his bed. The collateral circulation will be carried on by the supra and capsular artery of the subclavian, anastomosing with the external circumflex branch of the axillary.

During the *after treatment* the indications will be

1. To moderate the heart's action.

2. To take care of the affected limb by keeping it quiet, and the avoidance of any stimulating application to it so as to interfere with the establishment of the collateral circulation.

3. To watch for the attack of secondary hemorrhage.

4. Mr. Miller of Edinburgh has shown that there is a great tendency to congestion in the lungs when any of the great arteries at the neck are tied—I do not think it is necessary for me to enter into a detail of the methods by which these several indications may be fulfilled, except the 3rd which is more connected with the subject.

Then secondary hemorrhage may take place.

1. A few hours after the operation, when re-action takes place, from any of the small arteries in the wound, in order to combat this it may be necessary to open afresh the wound, apply cold and ligature afresh, as well as the exhibition of tartar emetic to the system with the, object of moderating the heart's action.

2. After the 3rd or 4th day this also proceeds from some of the small vessels of the wound and may require almost the same treatment.

3. About the 10th to the 15th day the ligature will separate, (i. e. in ordinary cases) and then from want of strength in the system the removal of the ligature may not be preceded by the adhesive inflammation, and hemorrhage will be the consequence, to check this afresh ligature must be applied above the old one—or bleeding may result owing to the unhealthy state of the artery, the anuerismal disease having implicated this part of the vessel itself.

J. KEARNEY.

MEDICINE.

Answer.—In describing the pathology or the rational theory of inflammation, it is necessary to give an account of the different stages into which inflammation passes on, from its first setting in to its termination. These stages are—1st, vascular excitement; 2nd, active congestion, and 3rd, the stage of true inflammation.

1*st.*—Vascular excitement. On the application of the exciting cause to the structure or part, the first effect is upon the sensory nerves of the part, which convey the stimulus to the centre of the nervous system, and by a reflex function by the motor nerves an action is set upon the vessels. A large quantity of blood is sent, which circulates with greater force and rapidity, vessels which were never before visible to the eye, can now be seen clearly. The vessels resist for some time the great stress that has thus been laid upon them, and no longer able to contain any further blood, effusion of serum takes place. So that in this stage we have blood circulating in an anormal quantity with effusion of serum. The exciting cause acting still further, the disease goes on emerging into its second stage, viz. active congestion. Blood flows in greater abundance, the tumultous circulation in the seat of all the changes, becomes languid, the vessels lose their tone and elasticity, with the effusion of serum there is liquor sanguinis, the blood changes in its character; the globules may be seen sticking to the sides of the vessels, some moving backwards and forwards, until perfect stagnation has taken place, the vessels in this stage have lost their tone and elasticity and are mere passive tubes; all around this seat of change, circulation goes on with perfect freedom until by extension of the same process they also become implicated. So that here we have effusion of liquor sanguinis with serum, clogging up the vessels, with a loss of tone and elasticity. This brings us to the third stage or that of true inflammation. The blood vessels now give way, blood is effused into the part, and actual destruction and disintegration of the surrounding tissues take place. Inflammation being thus set up in the part, necessarily goes on to any one of its various terminations.

The principal predisposing causes of inflammation are—1st, unwonted excitability of the part. The eye for instance by constraining at any one object causes a determination of blood, and by the application of any exciting cause it is liable to undergo inflammation.

2nd.—Plethora, one of the most common causes of inflammation is always liable to set up inflammation in any one organ or part, on the application of the least exciting cause; hence individuals of a plethoric constitution, are generally predisposed to it. Local plethora may again in the same way predispose an organ to take on inflammation.

3rd.—Weakness or debility may be mentioned as another of the predisposing causes. An organ once inflamed is rendered weak and debilitated, and having become a weak point is always liable to a recurrence of the attack.

4th.—Temperature or climate. Individuals coming from a cold to a hot climate, are generally liable to inflammations of the abdominal organs, and especially the liver. The function of the organ is increased, and the least exciting cause is enough to set up inflammation.

The most common exciting causes of inflammation are heat and cold, acting upon an organ previously predisposed. Mechanical or chemical injuries are also considered as exciting causes.

The terminations of inflammation are adhesion, suppuration, ulceration, and mortification. A separate description of these being not demanded by the question, I don't think it necessary to describe them, a mere enumeration being all that is required.

The most probable terminations with respect to the different tissues or organs affected are as follows. When inflammation attacks the mucous membranes, as for instance the intestines, or the mucous membranes of the larynx and the bronchial tubes, the most probable termination is ulceration and suppuration; but inflammation of the mucous tissues sometimes terminates in the formation of false membranes by the effusion of lymph as is seen in cynanche trachealis. Inflammation attacking serous membranes as in pleuritis, pericarditis, peritonitis goes on to the effusion of lymph, and causes adhesion of the several organs to their neighbouring tissues. When parenchymatous textures are affected as the lungs and liver, they go on to suppuration and gangrene and destruction of the tissues. The result of inflammation attacking the cellular tissue, is rapid sloughing and mortification. The inflammation attacking the structure of the brain has not one particular termination, sometimes we find serum effused into its ventricles, and upon its surface, sometimes it goes on to the formation of abscesses, and destruction of its nervous mass, and at other times into mere softening of its texture.

The most powerful antiphlogistic remedies that are to be had recourse to in the treatment of active inflammation are not very many in number: they are bleeding, the most powerful of all, both local and general: mercury administered in the form of calomel; tartar emetic, purgatives, and opium.

Bleeding is to be had recourse in almost all inflammations whatever the nature or texture of the organ may be. When this remedy is to be had recourse to, it should always be performed at the onset of inflammation. Its effects are manifested both upon the constitution as well as in the part affected, it relieves the organ of the great congestion, and relieves the vessels from their inordinate fulness. Its constitutional effects are manifested by the change in the nature of the pulse, and in the action of the heart.

Mercury is particularly applicable to inflammations attacking serous membranes, such as pericarditis, pleuritis, peritonitis, iritis, &c. It acts

upon them by its well known efficacy of presenting adhesions, checking effusions, and in causing an absorption of what has been already effused. Tartar emetic is particularly applicable to some inflammations attacking mucous membranes. Its most powerful effect is never more visible than in inflammation of the substance of the lung, and in the disease called croup. In bronchitis also it is particularly given.

Purgatives produce their beneficial effects particularly in inflammations attacking the brain. It is serviceable by producing a revulsion from the organ, by their drastic and purgative effects.

These remedies however are in most instances given in a state of combination in very many diseases.

Opium, although it is not such a very powerful remedy in inflammation as these already enumerated, yet given in combination with them, after bleeding, produces its sedative effects no doubt.

Cold may also be said to be an antiphlogistic remedy, and a very powerful one, particularly and especially in inflammation of the brain and its membranes.

J. W. Marganout.

Honor Examinations.

ANATOMY AND PHYSIOLOGY.

Answer to the 1st question.—The cerebro-spinal axis consists of the brain, the spinal cord, and the nerves that emanate from these centres.

The whole of these centres is made up of two substances; viz.

(*1st.*) White.

(*2nd.*) Grey or cineritious.

(*1st White.*) This substance is found in all the nerves and white parts of the nervous centres. It is less vascular than the grey, and in the brain contains no areolar tissue. It consists of fibres of the tubular variety which are arranged parellel to each other.

Structure of the tubular nerve fibres. When seen under the microscope by the reflected light, they appear as tubules having a silvery aspect. But examined by the transmitted light and if they be not decomposed, they are seen to consist of tubules and an inter-tubular substance, so that each appears as a glass rod. After a little time when the tubules begin to undergo decomposition, a faint grey line appears in the middle, which has received the name of axis cylinder or the primary band of Remak. This central substance is bounded on each side by a dark border called the white substance of Schwann, and lastly exteral to this is faint dark line which is the tubule of the fibre. Thus then it appears that when the the internal substance of the fibre has undergone congelation its structure assumes a different aspect from that which it assumes when it is fresh.

(*1st.*)—The axis cylinder is a column of nervous matter occupying the centre, and is composed of albumen in large quantity.

(*2nd.*)—The white substance of Schwann so called from the fact it constitutes the whiteness of the fibres, is situated on either side of the axis and consists of a granular substance composed of oleophosferic acid, cerebric acid, albumen, margarine and œlaine. This granular substance

congeles on exposure to air and gives rise to the dark line seen inside the proper tubule of the fibre.

(*3rd.*)—The tubular membrane forms the external covering of nervous substance, and is very delicate and homogeneous in its nature. This membrane gives rise to the faint dark line seen on the external side of the white substance of Schwann, and it is this which together with the latter gives rise to the double contour as seen in the tubular nerve fibres. Such is the ultimate structure of the tubular fibres as seen under the microscope. It often happens that the most delicate fibres; such as those composing the brain and the spinal cord, assume a varicose appearance, and in such cases the double contour is not visible in those parts which are contracted, but can be plainly seen in the dilated portions. The tubular nerves fibres run parellel to each other without branching or anastomosis, so that each tubule is a continuous tube.

(*2nd.*)—The grey substance of the cerebro-spinal axis is of a redish grey color, and more vascular than the white substance. It is found in the centre of the spinal cord in the form of two crescents with a central commisure between them.

In the medulla oblongata	Corpus dentatum of the olivary body in the floor of the 4th ventricle.
	In the restiform body an external layer covering the surface.
Cerebellum	Corpus dentatum.
Cerebrum	External covering of the convolutions.
	Pons Varolii.
	Locus Niger.
	Tubercula quadrigemina.
	Geniculata externa and interna.
	Valve of Vieussens.
	Commisura mollis.
	Corpora striata.
	Thalami optici.
	Lamina cinerea.
	Tuber cinerium.
Nerves	Posterior gangla of the spinal nerves.
	Casserian ganglion.
	Petrous ganglion.
	Jugular ganglion.
	Submaxillary ganglion.
	Optic nerve.
	Olfactory nerve.

The grey matter found in all these places consists of vesicles embedded in a granular matrix.

(*1st.*)—The vesicles consist of an external homogeneous membrane, with a vesicular nucleus in the centre. The nucleus is generally eccentric. Each vesicle is of a spheroidal figure. There are four kinds of vesicles; viz.

(*1st.*) Spheroidal vesicles of large size.
(*2nd.*) ———————— of small size.
(*3rd.*) Nuclei like corpuscles found on the surface of the convolutions of the cerebrum.

4th.—Caudate vesicles in which the cell membrane is prolonged into several processes, some of these end in free extremities, others are prolonged into the nervous fibre so that the cell membrane continuous with the tubular sheath of the fibres.

The structure of the sympethetic ganglion. Sypethectic ganglions consist of

(1*st.*) Solid fibres.
(2*nd.*) Vesicles.
(3*rd.*) Tubular fibres in sparing quantity.

Nerves of animal life consists of } Tubular nerve fibre; solid membrane.

Answer.—For the purpose of exposing the occipital artery into view we should first make transverse incision through the skin beginning from the chin, and carrying it backwards, upwards and outwards to the occiput, and then a vertical one along the median line. After reflecting it downwards and outwards, we come to the platisma muscle, the fibres of which pass vertically to the lateral part of the face. On dividing this muscle across and reflecting it upwards, we next meet the superficial fascia of the neck on which are seen the following nerves and vessels, viz.

(1*st.*) Auricularis magnus nerve.
(2*nd.*) Occipitalis minor.
(3*rd.*) Ascending branch of the superficialis colli.
(4*th.*) External jugular vein.

On separating this fascia from its attachments we see the sterno clidomastoid, crossing the occipital artery from below upwards and backwards. Then cut across this muscle and immediately we bring into view the deep cervical fascia; beneath the first portion the occipital artery may be seen arising from the posterior part of the external carotid. On removing this fascia we see the following parts covering deeply, and these are

(1*st.*) The posterior belly of the digastric.
(2*nd.*) The hypoglosal nerve which forms a loop round it.
(3*rd.*) Insertion of the sternomastoid.
(4*th.*) ——— of the spleneus colli.
(5*th.*) ——— of the trachelo mastoid.
(6*th.*) Apex of the mastoid process.

The artery rests successively on the following parts, namely—

(1*st.*) Internal Carotid.
(2*nd.*) ——— jugular vein.
(3*rd.*) Pneumogastric nerve.
(4*th.*) Styloid muscle and the hypoglossal nerve.
(5*th.*) Internal oblique and the lateral rectus.
(6*th.*) Complexus.

Answer 2*nd.*—The upper surface of the hand is called its palm. Its form is that of an irregular square, and has therefore four sides or borders. The upper border extends as high up as the anterior annular ligament. The inferior corresponds to the lowest ends of the metacarpal bones and the fold of integument found in the interspaces between the fingers. The outer or radial border is formed by the fold of integument situated in the interval between the base of the thumb and that of the index finger; as also by the head of the metacarpal bone of the thumb. The internal or

ulnar border is made up by the rounding of the skin from the interior to the posterior surface over the palmaris brevis and the abductor minimi digiti.

The fingers are 5 in number, may be considered as processes given off from the hand; of these four are inferior, viz., the index, the middle, the ring, and the little; and one external, viz., the thumb.

In the dissection of the palm of the hand, the first structure that is always met with is the skin. The integument in this part of the hand is very thick and of whitish red color, and this thickness principally depends on the thickness of the cuticle, which is here several times deeper than that of the skin in any part of the body, the soles of the foot excepted. The skin in this place is marked with curvelinear lines and ridges passing in different directions; these lines and ridges correspond to the elevations and grooves formed by the papillæ of the cutis vera. Another peculiarity which the skin has is that it is not beset with hairs as the skin of other part is; it has sebacious glands in such an enormous amount that every inch of it is said to contain no less than 5,800 of these bodies. The skin of the palm is continuous internally and externally with that of the dorsum of the hand, except a little process on the external side which descends to forepart of the thumb and covers it down to its tip. It is also continuous superiorly with the integument covering the forepart of the wrist. Inferiorly it is prolonged into clefts and upper surface of the four inferior fingers. The skin of each finger is marked by two transverse grooves corresponding to the phalangeal joints.

Immediately beneath the skin is the superficial fascia, extending from the forearm over the annular ligament to the upper surface of the deep and strong palmar fascia, where it divided into several processes which are continued to the fingers. Ramifying in this will be found several cutaneous filaments derived from the palmar cutaneous branch of the ulnar and the cutaneous branch from the median. A small subcutaneous named palmaris brevis will be found also to be embedded in this fascia; this muscle arises from the lower border of the annular ligament and passes downwards and inwards over the deep palmar fascia, and is inserted to its inner margin. It should not be forgotten that a thick layer of fat is situated over its surface.

Underneath the superficial fascia and all parts described in the preceding, is the deep palmar fascia. This is a layer of fibrous tissue having form of a fan, extending from the annular ligament to the fingers; its superior surface supports all those parts mentioned in the description of the superficial fascia. Its deep surface covers all the muscles, arteries, veins and nerves, and is in many places attached to the tendons. The superficial volar of the radial artery very often pierces this fascia, and joins the palmar branch of the ulnar and thereby completes the palmar arch. Underneath the fascia are situated the following parts; viz.

(1*st.*) Palmar arch.
(2*nd.*) Palmar branches of the median nerve.
(3*rd.*) The superficial palmar branch of the ulnar nerve.
(4*th.*) Muscles connected with the thumb.
(5*th.*) Muscles connected with the little finger.

(1*st*). *The palmar arch.*—The ulnar artery having reached the lower border of the annular, divides into two branches (1st) superficial and the deep palmar arteries. The former having gained the palmar surface curves from to the radial side and there joins the superficial *volar* of the radial,

and by this union is formed the superficial palmar arch, the concavity of which looks upwards and the convexity downwards; from the convexity of the arch spring four digital arteries, of which one is distributed to the ulnar side of the little finger. This artery is accompanied with a digital derived from the superficial ulnar. The other three branches pass downwards to the clefts between the fingers, where each of them divides into two branches, which are distributed to the colateral sides of the fingers; that is one supplies the colateral sides of the little and ring fingers, another those of the ring and middle fingers, and a third the ulnar side of the index, the radial side of the middle finger. The colateral branches of each finger are joined together by transverse branches.

(*2nd*).—*The palmar branches of the median nerve.*—The median nerve on reaching the palm of the hand divides into six branches, of which:

(1*st.*) Distributed to the muscles attached to the ball of the thumb.
(2*nd.*) Supplies the radial side of the thumb up to its tip.
(3*rd.*) Supplies the ulnar side of the same.
(4*th.*) Radial side of the index finger.
(5*th.*) The colateral sides of the index and the middle fingers.
(6*th.*) The colateral sides of the middle and the ring fingers. This branch also communicates with a branch from the ulnar. The position of these digital, is generally on sides of the corresponding digital branches derived from the superficial palmer arch.

(3*rd.*)—*Superficial palmar branch of the ulnar nerve.*—The superficial palmer branch of the nerve divides into three branches, of which one is distributed to the muscles of the little finger; a second to the ulnar side of the little finger, and a third to radial and ulnar sides of the little and ring fingers. The most external gives a filament which joins a branch of the median nerve.

(4*th.*)—*Muscles connected with the thumb.*—These are:

(1*st.*) Abductor policis.
(2*nd.*) Flexor brevis policis.
(3*rd.*) Flexor ossis metacarpi policis.

The first arises from the annular ligament and scaphoid bone, and is inserted into the bone of the first phalanx of the thumb.

The second is partly covered by the first, arises by two heads, between which the tendon of the flexor longus policis passes.

The superficial head arises from the annular ligament and trapezium, the other head is from the os magnum and trapezoides, and is inserted into the first phalanx of the thumb.

The third is the deepest and is whole covered by the flexor brevis policis. It arises from the scaphoid and trapezoides, and inserted along the whole length of the metacarpal bone of the thumb.

These are the superficial muscles of the thumb, there are deeper ones besides these, and they will be described in the future part of the dissection.

(5*th.*)—*The muscles connected with the little fingers.*—These are as follows:

(1*st.*) Abductor minimi digiti.
(2*nd.*) Flexor minimi digiti.
(3*rd.*) Flexor ossis metacarpi.

The first arises from the pisiform bone, and is inserted into the bone of the first phalanx.

The second from the unciform, and is inserted into same place.

Third arises from the unciform and the head of the metacarpal of the little finger, and is along the whole length of the metacarpal bone of the little finger. These muscles are covered superiorly by the fascia palmaris brevis and the inner branch of the superficial ulnar. On removing all these parts that are described we come now to the following parts, viz.

(1*st.*) Tendons of the superficial flexor of the fingers.
(2*nd.*) ——— of the deep———
(3*rd.*) Lumbricales.

The tendons of the superficial flexor are four in number, and are inserted to the apices of the second phalanx of the four little fingers. In the fingers they are bound down by tranverse fibrous sheaths and split into two, to let out the tendons of the deep flexor.

The tendons of the deep flexor have the direction as those of the superficial, and are inserted into the base of the last phalanx of the four little fingers.

The lumbricales are slender muscles, they arise from the tendons of the deep flexor, and are inserted into the metacarpal bones.

Beneath these already described are situated—

(1*st.*) Deep palmar arch.
(2*nd.*) Deep ulnar nerves.
(3*rd.*) Abductor policis.
(4*th.*) Three palmer interosii.

Answer 4*th.*—Testicles are two glandular bodies situated in the scrotum and suspended in that situation by the spermatic cord. In the young embryo they remain in the abdomen, occupying a place immediately below the kidneys, but in the seventh month of the intra-uterine they descend towards the internal abdominal ring, through which they enter the inguinal canal, and take a short course from above downwards, forwards and inwards, towards the scrotum in which they are at last lodged. The testicles in their descent from the abdominal cavity take in with them the different structures which constitute the abdominal wall, which give them separate coverings.

The coverings of the testicle may be described under three heads, viz.

(1*st.*) Different layers of the scrotum.
(2*nd.*) Those structures which the testicle receives from the abdominal wall.
(3*rd.*) Proper coverings of the gland.

(1*st.*)—Scrotum: this is a hollow bag divided into two compartments by a central septum, for the lodgement of the glands. It is situated in the space between the thigh of both sides, and has above it the penis and the urethra. In old weak persons it is flaccid, but in the young and the robust tense and contracted; this change of form is also undergone by it according to temperature thus cold contracts and heat dilates the bag. The scrotum consists of

(1*st.*) Skin.
(2*nd.*) Dartos.

(1*st Skin.*)—The skin in this part is dark and corrugated; it is very thin and is firmly attached to the next structure (the *dartos*). Along the median line and corresponding to the septum scroti, runs an elevated

ridge called the *raphe*, which is continuous behind with the *raphe* of the perineum and anteriorly with that on the lower surface of the penis. The skin in this part is covered with hairs and sebaceous follicles as in other situations, but with this difference that the sebaceous glands in this part do not open into the hair follicles.

The structure of the skin is the same as that of other parts, viz.

(1*st.*) Superimposed layers of epetheal particles.
(2*nd.*) Rete malpighii or the deep layer of the cuticle containing pigment granules.
(3*rd.*) Basement membrane.
(4*th.*) Cutis vera, or the analogue of the submucous tissue.

2*nd. Dartos.*—Immediately beneath the skin is superficial fascia, which in this situation assumes a peculiar form, and is known by the name of *dartos*. This tissue is continuous above with the superficial fasica of the abdomen and thigh, and below and behind with that of the perineum. It not only covers the whole surface of the scrotum but also gives a process along the middle to form the septum of the bag. Its structure is very different from that of the superficial fascia of which it is nothing but a continuation. It consists of fibres crossing at various directions so as to give it a reticulated appearance. But recent investigations have shown that there are muscular fibres of plain or unstriped variety intermixed with the fibrous structure. This layer has no fat deposited in its interstices. It is subject to all the stimuli except electricity.

2*nd.* Those layers which the testicles derive from the abdominal wall are the following as seen from without inwards.

(1*st.*) Intercolumnal fascia.
(2*nd.*) Cremasteric fascia.
(3*rd.*) Infundibuliform fascia.
(4*th.*) Peritoneum which in this part goes under the name of tunica vaginalis.

1*st.*—Intercolumnar fascia is merely a continuation of the fascia of the same name found at the apex of the external abdominal ring. This surrounds the gland on all sides, and is composed of fibres derived from the tendon of the external abdominal muscle.

2*nd.*—*Cremasteric fascia.*—Underneath the intercolumnar band, is a layer of muscular fibres derived from the inferior margin of the internal abdominal muscle. This goes under the name of cremasteric fascia, and consists of loops of muscular fibres descending from the internal abdominal muscle, and passing upwards to be inserted into the pubis. Some of these it is said end in the tunica vaginalis.

3*rd.*—*Infundibuliform fascia.*—This is derived from the fasica transvirsalis as the testis passes through internal abdominal ring.

4*th.*—*Serous layer.*—This is known here by the name of tunica vaginalis. It is serous membrane, which in early life is a prolongation of the peritoneum, but in after life when the communication is blocked up in the spermatic canal, it becomes a separate membrane. Like every other serous membrane, it is a shut sac and has an internal smooth and an external rough surface. It covers the whole gland except its posterior part through which blood vessels pass, and the upper portion of the epididimis which is left uncovered. It is also reflected to the side of the bag which contains the gland. That portion of it which covers the gland is called by the name of *tunica vaginalis testis,* but that which covers the parietes

is called the *parietal layer*. Its structure is same as that of other serous membranes.

3rd.—Proper coverings of the gland itself are:

(1*st.*) Tunica albuginea.
(2*nd.*) Tunica vasculosa.

1*st.*—*Tunica albuginea.*—This is a fibrous membrane of an oval form and a bluish white color and firm structure. It encloses the substance of the gland. Its external surface is smooth and covered by the serous membrane except at its posterior surface called the *mediastinum* testis through which blood vessels pass into the gland and the ducts come out. Its internal surface is rough and is covered by a cellulo-vascular layer, the so called *tunica vasculosa*. This membrane is thick at its posterior surface where it constitutes the *medeastinum testis;* at this part processes from the membrane pass on all sides so as to divide the whole gland into numerous compartments in which the lobules of the gland are lodged. These processes are called *dissepiments*. The tunica albuginia as before said consists of fibrous tissue crossing in different directions.

2*nd. Tunica vasculosa.* This is a layer of blood vessels supported by a layer of cellular tissue. It not only covers the whole inner surface of the tunica albuginia, but sends in processes which enter the substance of gland with the dissepiments given off by the latter membrane.

Glands called Testes.—These are two oval bodies flatted on their sides. Each has an external and an internal surface, a superior and an inferior extremity and an anterior and a posterior border. The superior extremity looks outwards, upwards, and forwards; the inferior directed downwards, backwards, and inwards.

Structure of the testis.—On making a longitudinal section it will be seen that the whole substance consists of a greyish white mass made up into lobules; each of them is pyramidal in shape; the base directed towards the external surface and the apex towards the mediastinum. Each lobule rests on the dissepiments as before mentioned, and consists of two or more convoluted tubes called the tubuli seminiferi. Each of these tubes is about $\frac{1}{300}$ of an inch in diameter, and some of them are about 3 feet in length. Each consists of a delicate basement membrane and epithelium which is speroidal at the part where the secretion goes, and columnar in the rest of its course. The tubuli seminiferi commence either by loops or free cœcal extremities; but none of one lobule communicate with those of another. They end by about 20 or 25 straight vessels which are named the vasa recti, these vessels pass through the medastinum in which they form a network with the blood vessels entering that part and this portion is called the rete testis. After having made this network they assume the form of cones which are called *coni vasculosi*. These cones form the head of the epididimis. From these the cones join and form the body of the epididimis.

BRIJONATH BUNDOO.

BOTANY.

Answer 1. Latent buds are those that are not developed, but lie dormant never to come out in future, unless under very favourable conditions to regular buds, on the contrary develope into branches and

leaves, and continue the growth of the stem in an upward and lateral direction; in the former case their position is terminal, in the latter at the axils of leaves.

2. The *apparent* difference between an inferior and a superior ovary is, that in the former case, the stamens seem to arise from above the ovary, and in the latter from below it; but the *real* difference lies in the calyx being adherent to the ovary in the first, and free in the second case.

3. Disk is that part of the Torus or Thallamus, which entervenes between any two whorls of the floral parts. It represents the internode between these two whorls of modified leaves, and is produced by the shortening of it (internode.)

4. An ovulum is generally composed of two coats, called the Primine and Secundine, and a neucleus. 1. *Primine* is the most external coat, and according to some Botanists is first developed. It forms an entire covering except at the organic apex of the seed, when it has a small openning called "Exostome." 2. *Secundine* is the next coat, immediately in contact with the neucleus and like the Primine has a hole in the apex, named Endostome. These two openings the Endostome and the Exostome, together form the "Micropyle" of the ovulum or the foramen through which the pollen tube enters in fecundation, and afterwards the radical shoots out in germination. 3. *Neucleus or Tercine* is the essential part of the ovule and in some plants is the *only* part present. It first forms a small shut sack without any cavity within it, but gradually the "embryo sack" is developed in it and in some instances another layer of cells is formed between the embryo sack and the wall of the neucleus. To connect this layer, and the embryo sack, with the description of the other coats they have been named respectively quartine and quintine.

5. The radicle is directed towards the organic apex of the ovule, which is indicated by the foramen or micropyle already described in the answer 4th, so by only ascertaining the position of this point, we will know the future direction of the radicle. The direction of the plumule is indicated by the organic base of the ovule, which is chalaza.

6. When the mature carpels of a single flower, unite with each other either partially or completely, they form a syncarpous fruit; but if they remain distinct and separate, each of these carpels, become an apocarpous fruit. Apocarpous fruit is usually produced by a pistillum formed of a single carpel only.

7. Arillus is an adventitious coat, partial or complete, developed on the impregnated ovules of some plants, such as nutmeg, lechee, &c. It lies external to all the coats of the seed and is formed by a kind of "*hypertrophy*" of the Funiculus.

8. Pine Apple is an aggregate fruit formed by a spike of flowers which has become succulent. The name of this variety of anthocarpous fruits is "sorosis." The edible part of the lechee is the arillus described in the answer 7th. Mango belongs to the class of apocarpous indehiscent fruits, and is itself a drupe.

9. All regular flowers, that is such as have all the whorls of floral parts present, belong to the division diclamydœ. Monoclamydious flowers have only one whorl of floral envelopes (which is calyx generally) and in aclamydious flowers both the whorls of floral envelopes are absent.

10. *Akkund* (Callotropis gigantia) *Anuntmool* (Hemidesmus Indicus) are the noted medicinal plants of this order used by the *hakims* and boiddos, but there are others not used in *regular* native medical practice but possessing potent virtues in some particular disease—one of these is *Chagulbatty*.

11. Turmeric is derived from a plant, belonging to the natural order Zingiberaceæ.

12. Simple opposite leaves with interpetiolary stipules are the diagnostic characters of the family Rubiaceæ. As this plant possesses these characters it must belong to the natural order Rubiaceæ.

NIL MADHUB MOOKERJEE.

CHEMISTRY.

I. When solids are converted into liquids, and the latter into gases, a large quantity of their sensible heat becomes latent, producing cold in consequence. This is the principle, upon which all the processes for producing artificial cold depend; but as the degrees of cold vary directly as the quickness with which the solids melt, and the liquids vaporize, the object of all classes of processes is to produce such conditions, by which solids melt and liquids evaporate speedily. Mixtures of ice and salts, of salts and acids and of ice, salts and acids, are used respectively to lower the temperature of bodies.

Cold may also be produced, by promoting speedy evaporation of liquids, such as of water, ether, &c. The causes which prevent the attainment of greater degrees of cold, than have been hitherto reached, are the pressure of the atmosphere. And the temperature of the surrounding media.

II. The most noted combinations of Fluorine are 1. Hydro-fluoric acid. 2. Terfluoride of boron. 3. Terfluoride of silicon and 4. Fluoride of calcium.

1. *Hydrofluoric acid—H Fl* is a liquid, of a very pungent and irritating odour, and corrosive taste. When it comes in contact with the skin, it burns it, and inflicts severe injury; and the sore that is produced does not heal easily. It fumes strongly on exposure to the air, and has strong affinities for many substances. It forms with many metallic oxides, fluorides of those metals—MO + H Fl = M Fl + HO.

2. *Terfluoride of Boron—Br Fl^3* is a pungent gas, of a grey colour, which fumes strongly in air. This gas is absorbed by water, which decomposes it, forming in the first instance, boracic acid and hydrofluoric acid, and afterwards, in combination with one equivalent of water, borofluoric acid. This last acid forms with potassium, the compound called borofluoride of potassium, from which boron is obtained.

3. *Terfluoride of Silicon—Si Fl^3* is a liquid, but in other respects, is very analogous in properties to terfluoride of boron. It is also decomposed by water, and forms a remarkable compound called hydrofluosilicic acid, which forms with potassium a combination, similar to borofluoride of potassium. Fluosilicic acid has a strong affinity for potash, and is the effectual means of separating it from many of its salts.

4. Fluoride of calcium—*Ca Fl*—fluoride of calcium or fluorspar is found in crystals of different shapes, and colours, on which account, it

is used for ornamental purposes. Fluorine has the greatest affinity for silicon whether free or combined, so all the compounds of fluorine have one common character, namely that when acted on by any stronger acid, their fluorine is set free, and acts strongly on glass. Fluoride of calcium when acted on by HO SO^3 gives off fluorine, which etches or corrodes glass.

III. There are two kinds of tannic acid—The type of one is that which exists in nut galls, oak bark, &c. And that of the other is found in catechu, kino, &c.

The first kind of tannic acid is obtained by pouring ether, on powdered nut galls, in an apparatus of displacement; the ether carries with it all the tannic acid, and collects itself in the lower part of the apparatus in two strata—the lowest of which contains all the tannic acid. This stratum is separated, and tannic acid obtained by evaporative *properties.* It is of a white colour, and not at all crystalline. It has a strong astringent taste, and is soluble in water, and cold alcohol. Tannic acid when exposed to the influence of air for some time, becomes converted into gallic acid, but the exact nature of the change is not fully understood. Sulphuric acid causes in this acid a precipitate, which is a compound of SO^3 and tannic acid—If the precipitate be made in hot SO^3 HO, and afterwards boiled in the same acid, the whole of the tannic is converted into gallic acid—*Tests of tannic acid*—1 Persalts of iron give in solutions containing this acid, a dark inky precipitate.

2. With gelatine this acid combines forming a curdy precipitate. The process of tanning, or the conversion of hydes into leather, depends upon this affinity of tannic acid for gelatine.

3. Most vegetable bases are precipitated by tannic acid. The second kind of tannic acid is obtained from katechu or kino, and is of a brownish colour. It does not give a *black*, but a dirty greenish brown precipitate with persalts of iron.

IV. Soap is the combination of a fatty acid, with an alkaline or earthy base. It is generally prepared, by acting on animal fats or vegetable fixed oils, with an alkali or alkaline earth, and the theory of the process is the following—fatty acids exist in combination with a base, which is oxide of glyceryle. And the process of saponification consists in replacing this organic base by an alkali or earthy base. True soaps are soluble in water, and this solution has an oily feel.

1. Oxygen is obtained by heating chlorate of potash with 1-10 of its weight of peroxide of manganese. Peroxide of manganese is not decomposed itself, but promotes in a high degree the separation of oxygen from chlorate of potash. The following equation explains the change—
$Cl\ O^5\ \ KO + Mn\ O^2 = Mn\ O^2 + K\ Cl + O^6$

Orygen is also obtained by heating MnO^2

2. $Mn\ O^2 = Mn^2\ O^3 + O$, or by acting on it with HOS; O^3 —
$Mn\ O^2 + HO\ SO^3 = MnO\ SO^3 + HO + O.$

If peroxide of mercury be heated, it gives off oxygen, being itself reduced into protoxide, $2\ Hg\ O^2 = 2\ Hg\ O + O^2$ But one of the best processes for obtaining it, is by heating bichromate of potash, when the following changes take place—$2\ K\ O\ 2\ Cr\ O^3 = Cr^2\ O^3 +$
$Ko\ Cr\ O^3 + O^3$

Properties. It is a gas, transparent and colourless; without taste or odour. Its sp. gr. 1.111—And has never been liquified. It com-

bines with all elementary bodies with the exception of perhaps fluorine, and forms with them compounds which have either acid or basic properties. It is a combustible gas, and is the source of all combustions slow or quick, that are carried on in our atmosphere. Many substances have a strong affinity for it, and combine with it with the development of heat and light.

Tests.—1. A match of wood faintly lighted takes fire and burns vividly in the gas.

2. A red hot wire of metallic iron burns in it with vivid scintillations

3. Phosphorus burns in it with a bright dazzling light which the eye cannot endure.

Nil Madhub Mookerjee.

MATERIA MEDICA.

Morning Paper.

Answer I. The circumstances which modify the action of medicines on the human system are 1 age, 2 sex, 3 climate, 4 habits and occupations, 5 disease, 6 idiosyncracy, 7 combinations with other medicines.

1. *Age* is one of the principal modifying circumstances, on account of the constitutional powers being gradually developed from infancy to manhood, and declining from the latter (though not in a fixed or uniform ratio) to old age. In consequence then, of the different physical and vital strengths possessed by the infant, adult, and old man, the action of medicines varies considerably in reference to the age of the individual. The same dose which the adult bears with impunity, proves in many instances a dangerous poison to an infant. To afford some guide to physicians, tables of doses graduated from the first month of life to adult age, have been formed from the accumulated experience of many practitioners.

2. *Sex.* Some difference in the action of medicines arises from this circumstance also. This is chiefly in consequence of the great difference in the generative systems of the two sexes. The class of medicines called Emmenagogues can only act on the female sex, the organ on which they act being absent in males.

3. *Climate* modifies the action of medicines, chiefly by producing in the constitution of individuals, different susceptibilities for different classes of remedies. The natives of India can bear the action of purgatives better than those of Europe; but the latter on the other hand bear bleeding better than the former.

4. *Habits and occupations* have great influence in modifying the action of medicines. Persons living in low damp apartments, badly fed, badly clothed and ill protected from the influence of malaria and other debilitating causes, cannot well bear an antiphlogistic treatment. Opium eaters, can bear a far larger dose of their favourite drug than can be conceived. Workers in the manufactories of bleaching powder, would feel no inconvenience in an air impregnated with chlorine gas.

5. *Disease.* To illustrate the influence of disease in modifying the action of medicines, I need but refer to the action of opium—In the

latter stages of pneumonia and bronchitis, in tetanus, delirium tremens, some varieties of insanity, hydrophobia, uterine hemorrhage, colic pains &c., the action of this drug is greatly modified. The same thing may be observed in the case of mercury and Tarter Emetic in inflammatory diseases.

6. *Idiosyncracy.* This circumstance produces in many instances very anomalous effects. Some constitutions are peculiarly susceptible to the action of mercury, in them very small doses of this drug produce dangerous symptoms; others are very liable to be narcotized by very small doses of opium.

7. *Combination with other medicines.* To illustrate this modifying circumstance, I may refer to the combinations of ipecacuan and opium, camphor and opium, and tartar emetic and opium. The first is one of the best diaphoretics, the second, (compound tincture of camphor) possesses the advantage of not producing the subsequent effects of opium, and the third, one of the best remedies for delirium tremens.

Answer II. Proofs of absorption of medicines are 1st demonstrative and 2nd presumptive.

1. *Demonstrative proofs*, were afforded by those instances in which the substances have been actually found in the blood, tissues of organs, secretions, and excretions. Alcohol, arsenic, ferrocyanide of potassium, opium &c., have been detected in the blood, and turpentine, rhubarb, cantherides &c., are generally found in the urine of persons treated by these substances.

2. *Presumptive proofs.* Action of local remedies on the whole system—Affections of internal organs by remedies applied on the surface, and the cure of diseases in the most distant parts of the frame, effected by introduction of medicines into the stomach, afford strong *presumptive* evidence that medicines are absorbed; in fact, the absorption of medicines, was anticipated long before it was proved demonstratively.

Answer III. Emetics are those medicines, bythe action of which the contents of the stomach are evacuated, by an antiperistaltic action, through the mouth. According to the theory of Dr. Marshall Hall the act of vomiting is an excito-motory action—the impression which the emetics make on the nerves of the stomach, is carried by incident fibres to the glanglia or through them, to the cord and thence reflected on the motor fibres supplying the stomach and the expiratory muscles. Emetics are divided into specific and local. The first order have a specific action upon the stomach through whatever channel they are introduced. Tartar emetic is the noted example of this order.

The vomiting produced by the action of arsenic is also specific, since it acts on the stomach through whatever passage it is introduced into the system.

The second order of emetics, act only by their local irritant action, sulphate of copper, and sulphate of zinc are examples of this order.

Answer. IV. The chief points of importance that demand attention in regard to the medicines themselves are, 1, their doses—2, pharmaceutical combinations—3, the strength of these combinations—4, the actions of the medicines themselves and of the different preparations of these medicines—5, combination with other medicines—6, the nature of the malady and its complications.

In regard to the effects to be produced by them. 1,—intervals at which they are to be taken—2, regulation of the external circumstances, such as the air and temperature of the sick room, use of bed clothes, use of diluents—3, nature of the disease.

Afternoon Paper.

No. 1—Contains Nitre. Nitrate of potash is distinguished from other salts by, 1 deflagrating when mixed with charcoal and set on fire; 2, by crystalizing from its solutions in fluted prisms; and 3, by giving off vapours of nitric acid when mixed with sulphuric acid and heated. Besides these, its special properties, it possesses the characteristics of salts of potash and of nitrates. I may notice these characteristics generally. It gives precipitates, with perchloric, tartaric, fluosilicic, carbazotic and racemic acids, and with bichloride of platinum. When sulphuric acid is added to a solution of nitre or any nitrate, it renders proto-sulphate of iron brown, converting it into persulphate.

No. 2—Contains sesqui-carbonate of ammonia. Its distinguishing tests are:—1, it gives no precipitate with sulphate of magnesia, with which it forms a soluble double salt. 2. When mixed with a stronger acid, it effervesces, giving off carbonic acid. 3. It precipitates salts of zinc, of alumina, of iron, and of baryta.

No. 3—Contains nitrate of copper. 1. When $HOSO^3$ is added to a solution of this salt, it changes the colour of proto-sulphate of iron brown. 2. It gives a bluish white precipitate with potash, but with ammonia, the colour of the precipitate is violet blue. 3. Sulphuretted hydrogen gives a black precipitate. 4. Bichromate of potash a claret red precipitate. 5. The salt is reduced to the metallic state by iron, steel, and zinc.

No. 4—Contains nitrate of silver. 1. Like the other nitrates it converts the proto-sulphate into persulphate of iron when acted on by $HOSO^3$ 2. It is soluble in water, and like the other compounds of silver, is sensible to the action of light. 3. Alkalies give a brown precipitate with a solution of it. 4. Sulphuretted hydrogen precipitates a black sulphuret of silver. 5. It is reduced to the metallic form by copper, zinc, and mercury. 6. With bichromate of potash it gives a red precipitate. 7. With iodide of potassium, a whitish yellow precipitate. 8. When it is ammoniated, it gives a yellow precipitate of arsenite of silver with $As^2\ O^3$ or its salts.

No. 5—Oxalic acid. 1. When heated alone or with $HOSO^3$ it is wholly volatilized, being converted into CO^2 and CO. 2. With nitrate of silver it gives a white precipitate of oxalate of silver. 3. With lime water or a soluble salt of lime, it gives a precipitate of oxalate of lime. This test is very characteristic.

No. 6—Sulphate of magnesia—1. It crepitates when heated, giving off its water of crystallization, and is very soluble in water, from which it crystallizes in small slender prisms. 2. It gives a white precipitate with the alkalies, and their carbonates, with the exception of carbonate of ammonia, with which it forms a soluble double salt. 3. With oxalate of ammonia it gives no precipitate, but forms a double oxalate of ammonia and magnesia. 4. When carbonate of ammonia is first added to a solution of sulphate of magnesia, and then phosphate of soda, an insoluble double phosphate of soda and magnesia is thrown down. This is the most characteristic test of the presence of magnesia.

No. 7—Iodide of potassium 1. It gives a bright yellow precipitate of iodide with soluble salts of lead. 2. With salts of silver a whitish yellow precipitate. 3. Proto-salts of mercury a greenish yellow precipitate. 4. With peroxide or persalt of mercury a bright scarlet red precipitate

of biniodide of mercury. 5. When heated with peroxide of manganese and sulphuric acid, it gives off the purple vapour of iodine, which strikes a blue colour on a starch paste held over the retort. 6. As a salt of potash it gives precipitates with perchloric, carbazotic, fluosilcic, racemic, and tartaric acid, and with bichloride of platinum.

No. 8—Sulphate of copper. 1. It gives a white precipitate of sulphate of baryta with barytic water or chloride of barium. 2. Its other tests, depending on its being a salt of copper, are the same as those described in the place of nitrate of copper No. 3. It does not convert the proto-sulphate of iron into persulphate when acted on by SO^3 HO. 3. When this salt is ammoniated (i. e. acted on by ammonia as long as the precipitate of oxide does not dissolve) it gives a grass green precipitate with arsenious acid or its salts. The precipitate is arsenite of copper, and is called Scheele's green.

Answer II.—When a mixture of two equivalents of sulphuric acid, and one of nitre is distilled, nitric acid is given off in vapours which condense in a well cooled receiver. The first part that is collected, contains much impurity. The theory of the change is the following KO NO^5 + 2 HO SO^3 = HO NO^5 + KO HO^2 SO^3—The acid can also be obtained by taking one equivalent of each, but in that case the neutral sulphate is formed which is almost insoluble in water, and cannot be separated unless the retort be broken. But by taking two equivalents of SO^3 HO, hydrated bisulphate of potash is formed, which, being soluble, is dissolved out by water without any injury to the retort. Besides this there is another advantage in taking two equivalents of the acid, namely, much less heat is required. Nitric acid can be as well, or rather better prepared, by the action of HO SO^3 on nitrate of soda, the latter being a cheaper salt would procure the acid at a less cost.

Tests.—1. In contact with air it gives off white vapours, and stains all organic substances yellow. 2. When heated with copper or mercury, it gives off deatoxide of nitrogen, which in contact with air becomes converted into a red gas (nitrous acid gas). 3. With tartar emetic it gives a precipitate of nitrate of antimony. 4. With solution of potash, it forms nitrate of potash which crystallizes in fluted prisms, and possesses the characteristics described in the place of that substance. 5. It converts the proto-sulphate of iron into a brown persulphate. 6. It strikes a red colour with morphia or its salts. 7. With sulphate of narcotine it strikes an orange brown colour.

Uses.—It is in the concentrated state, a corrosive irritant; in the diluted state, it is refrigerant and tonic. Its uses depend upon these physiological actions, and it is, besides, specific with reference to syphilis and hepatic disease. Dose of the diluted acid is from mx to ʒss.

Nil Madhub Mookerjee.

MATERIA MEDICA.

Morning Paper.

1. Detail the circumstances which modify the action of medicines on the human system.

The most important of the circumstances modifying the action of medicines which first comes under consideration is—

1. *Age.*—As age exerts such a powerful influence in modifying the characters, customs, habits, and susceptibilities to disease in different individuals; it must necessarily follow, that it should exert a like influence on the operations of those remedial agents, which are exhibited for the purpose of curing disease, and this, experience has amply confirmed. The different period of life which require consideration are those of infantile life—puberty—manhood or womanhood—and the decline of life or old age.

During the period of infancy, the general operation of medicinal agents are exceedingly violent and energetic, being increased or aggravated according to the largeness of the dose administered. The system however at this period is exceedingly tolerant to the influence of one of our most valuable remedies, viz. mercury, which though administered under the most favorable circumstances, can seldom bring the system so far under its influence as to cause salivation. While opium on the contrary can scarcely be administered with sufficient precaution, or in doses so small, but that it exerts an exceedingly dangerous and fatal action on the system. Even so small a dose as one minim of laudanum has, in one instance, caused the death of a child to whom it was administered.

Puberty.—This is the next period of life of sufficient importance to entitle consideration. At this period the human frame undergoes the most marked and visible alterations, either gradually or suddenly; and hence it is that the action of medicines suffer such remarkable modifications, that remedial agents which but a short time previous to the changes which the system is undergoing seemed to agree most, at this period seems to exert a less certain favorable influence.

Manhood.—During this period of life the actions of remedies are more constant and less liable to varying changes in their operations. It is during this period that the system is in the most favorable condition to resist the tendency to disease, and to combat it most effectually when it has attacked the system; Nature herself seems to favor these operations, and generally with the most beneficial results.

Decline of life or old age.—Medicines now require to be exhibited with caution, for the system again relapses into that condition most susceptible to the influence of all impressions, whether from without or arising from within the frame itself. Many remedies are now apt to disagree or to be unfavorable in their operations, while others require administration in very small doses or in those different forms of combination which are the most likely to be mild and certain in their operations. At a still later period of life when the frame becomes decrepit, and the bodily powers are fast sinking, and when the mind itself returns to a kind of second childhood, or a state bordering on mental imbecility; 'tis then that the administration of remedies requires far greater caution than even during the earlier period of infancy; for they are then liable to the greatest uncertainty in their operation, and to be followed by sudden, unexpected, and fatal results.

2. *Sex.*—Sex has, I believe, but with few exceptions, the most general modifying influence on the action of remedies. The female sex is less tolerant of the action of strong and active remedies than the male sex, in consequence of their greater delicacy of organization. During certain periods or conditions of the system, viz. those of pregnancy, and lactation and menstruation the actions of remedies are liable to further modification.

3. The climate and season of the year influence the action of medicines in marked degree—thus during certain seasons of the year when cholera is most prevalent, the administration of saline and hydragogne cathartics should be strictly avoided, as their use has not unfrequently been attended into fatal results. They seem to excite into action those morbific germs of cholera, which might have otherwise lain dormant in the system.

4. *Temperament*—materially modifies the action of most medicinal agents. For instance allowing the division of temperaments into sanguine—phlegmatic—bilious or nervous we find that the sanguineous bears blood-letting to a far greater extent than any of the other temperaments —that the phlegmatic admits of and requires the exhibition of much stronger and more active remedies, that the nervous is extremely susceptible to the influence of stimuli, whether medicinal, or those mental passions and emotions which are often attended with the most beneficial therapeutic results, and which in like manner prevent the bringing about of such a good result. The bilious, abdominal, thoracic and the innumerable modifications and combinations of temperament which are said to exist, all materially modify the action of medicines.

5. *Habit.*—Influences the action of opium, alcohol, the smoking of strammonium and other narcotics, most powerfully, as is best witnessed when any of the above mentioned remedies are exhibited for medicinal purposes—we then find that our remedies require to be exhibited in double or treble the doses which should be necessary in ordinary cases. The doses sometimes require such enormous augmentation as would be sufficient to kill or poison another not habituated to its employment.

6. *The Constitution.*—If weak or robust influences the action of remedial agents very powerfully.

7. *Disease.*—And the stages of disease modify the action of most remedies. In tetanus and scirrhous affections opium has been taken to such an amount as might at first consideration appear improbable. In pneumonia, the action of tartar emetic suffers remarkable toleration.

8. *Idiocyncrasy.*—In many individuals has such an influence in modifying the action of mercurials on the system that $\frac{1}{10}$ of a grain of any mercurial preparation, if taken into the system, would be immediately followed by the most disastrous results. Opium in the Malay causes a ferocious delirium, and it is during this period that they do frequently " run the muck."

9. *The mode of combination of remedies* has much to do in influencing their actions. Combinations with some increase while with others diminish their operations.

10. *Mental influence.*—Retards or increases the operation of remedies. Nothing so much tends to retard their operation *or distrust* of the abilities of the medical attendant, while hope and confidence in his talents and skill, are attended with the most beneficial results.

Question 2. What are the proofs of the absorption of Medicines ? Give examples.

The proofs of the absorption are founded on (two) 2 circumstances.

1st. On their disappearance from shut cavities.

2nd. On their detection in the various secretions, tissues, and solids of the body.

a. Dr. Christison injected 4 ozs. of oxalic acid into the peritoneal cavity of a cat—after the lapse of a certain interval 3 ozs. had disappeared,

though there had been no opening or orifice from which it might have escaped—and hence the only reason which may be offered for its disappearance is the following: its absorption and entrance into the circulation.

b. Various medicinal agents have been detected in the different secretions of the body, either by their appropriate tests, or by the physical characters which they impart to secretions in which their presence have been indicated.

In the sweat—the odor of sulphuretted hydrogen has been readily recognised in individuals taking sulphur internally; and silver coin or watches which they have carried in their pockets have been blackened by its action.

b. In the urine the coloring principles of madder and rhubarb have become apparent. The use of alkalis have been followed by an alkaline condition, and of acids by an acid condition of the urine, as rendered evident by its action on litmus and turmeric. A paper dipped in the urine of a person taking nitre, will deflagrate on being dried and burnt in the flame of a candle. Iodine has also been detected in the urine after its use.

c. The odor exhaled by the eating of garlic so well known and the etherial odor exhaled after the use of ether may be brought forward as further evidences of the absorption of medicines. After the use of alcohol an etherial odor may often be detected in the breath. In this case the alcohol seems to undergo decomposition into the oxide of ethyl and water in its course through the circulating current.

d. If I am not mistaken the presence of iodine in the saliva and the mucus of the nose have been detected after the long continued administration of iodide of potassium.

e. In the solids of the body, I may enumerate the detection of copper in the liver, of iodine in the muscular tissue, and of mercury on the bones of some individuals.

f. The skin—after the long continued administration of the nitrate of silver the skin becomes darkened, in consequence of the deposition of the oxide of silver in the cutis vera. The skin of a lady who had taken iodine long, had become of a dingy brown during *its* administration.

g. The last of secretions coming under consideration is the *milk*—which has under the administration of opium and senna become capable of narcotizing and of purging the infant at the breast: a fatal case of narcotism has *occurred* in an infant after sucking a woman who had taken opium.

Question 3rd. What are emetics; how are they supposed to act; into what orders are they divided? Give examples.

Emetics are substances which when taken into the stomach cause first the evacuation of its contents; and secondly some of its own secretions and those of neighbouring organs such as mucus—gastric juice—and sometimes of bile.

They are supposed to act by causing an inverted peristaltic action of the muscular fibres of the stomach and œsophagus—which is induced by irritation communicated to the termination of the ultimate filaments of the pneumogastric nerve. The abdominal muscles and diaphragm are concerned in the action of vomiting. The action of vomiting, and consequently the action of emetics, is supposed to depend on reflex action.

The stimulus being conveyed by the incident or sensory filaments to the nervous centre—and being from thence reflected by the motor filaments to the muscular fibres to which they are distributed.

Emetics are divided into direct and indirect—one operating on the living system and producing its full emetic effect even though applied to a distant part of the system, the other operating only when brought in contact with the stomach itself. I may adduce as an example of the first.—Tartar emetic which produces its full emetic action even if it be but injected into the veins—as examples of the latter I may enumerate the sulphate of zinc and copper. Besides these (2) two great divisions of emetics into direct and indirect, we have a further subdivision of them into vegetable and mineral—as examples of the former I may mention ipecacuanha and squill, two of the most important of our remedial agents; and of the latter the sulphate of zinc, the sulphate of copper and tartarized antimony, are those most frequently employed. A rocking motion of the body, often acts as an emetic—best witnessed in people who have not been accustomed to the rocking motion of a vessel.

Question 4th. What are the chief points of importance that demand attention in prescribing medicines? 1st as to the medicines themselves. 2nd as to the effects to be produced by them.

1st. As to the medicine chiefly.

a. It should be exhibited in the most *palatable* form.

b. The remedies if from vegetable kingdom (such as extracts) should be fresh and not of so long a standing as to have suffered decomposition.

c. They should be exhibited in the most *convenient* forms, either as pills, decoctions, tinctures or infusions, and should not be too bulky; if the pilular form be preferred—a pill never exceeding 5 grains.

d. If administered in combination the prescriptions should not be too complex.

e. Incompatibles should never be prescribed together.

2ndly. As to the effects to be produced by them.

a. They should never be so combined or in too complex a form that they might interfere with each other's operation, and defeat the purposes for which they are intended.

b. They should be so exhibited as to modify each other's action if violent, and to increase each other's action if not sufficiently powerful when alone and uncombined.

c. Medicines should be administered at period of the day when their action is attended with the best results—as the morning for purgatives.

d. Those medicines should be avoided which disagree with any particular individual.

e. In some diseases the previous tension—fulness of the circulating system—should be reduced by depletion and purgative, previous to the administration of other remedial agents: E. G:—Digitalis should never be given in the active forms of dropsy without having preceded its administration by the use of the lancet.

f. The doses of remedies should be so regulated as not to produce a different result from that intended.

g. The action of remedies should always be assisted by attention to cleanliness, diet, &c.,

h. The patient should have confidence in the utility of the remedies he is taking.

Afternoon Paper.

Question 5.—Identify the substances marked 1, 2, 3, 4, 5, 6, 7, 8, and give their characteristic chemical tests by which each is known.

No. 1. Nitrate of potash, known to be a salt of potash, by the proper tests for that alkali, which are the following:

1. Its communicating a pink flame to alcohol.

2. By giving a yellow precipitate with the bichloride of platinum.

3. By yielding crystals of the bitartartrate of potash—when set aside after the addition of tartaric acid.

4. By yielding a yellow precipitate on the addition of carbazotic acid—the carbozotate of potash.

As a nitrate it may by known—

1st. By its deflagrating on being set fire to with charcoal.

2nd. By the appropriate tests for nitric acid.

No. 2. Carbonate of ammonia, known to be a salt of ammonia.

1st. By its pungent and irritating odor.

2nd. By striking a deep blue with the sulphate of copper forming the *ammonio cupri-sulph.*

3rd. By fuming strongly when a rod dipped in hydrochloric acid is held over a jar containing the carbonate of ammonia.

4th. By giving a yellow precipitate with the bichloride of platinum.

It is known to be an alkali—

1st. By its turning vegetable blue into green.

2nd. By its restoring the color of litmus reddened by an acid.

It is known to be a carbonate—

1st. By the evolution of carbonic acid, when the carbonate is saturated with quicklime.

No. 3. Acetate of copper.

It is known to be a salt of copper—

1st. By striking a deep blue with a solution of ammonia.

2nd. By obtaining a coating of metallic copper, on an iron knife when dipped into its solution.

As an acetate it may be recognised—

1st. By the evolution of fumes of acetic acid on the addition of sulphuric or any other stronger acid.

No. 4. Nitrate of silver.

Known to be a salt of silver—

1st. By the precipitation of the chloride of silver on the addition of Hydrochloric acid or any soluble chloride; which is further recognised by being a horny mass, blackening on exposure to light; being insoluble in nitric acid, but soluble in a strong solution of ammonia; this is the most characteristic of its tests.

2nd. By obtaining a button of metallic silver on reducing the chloride so obtained by cupellation.

3rd. By obtaining a white precipitate of the cyanide of silver on the addition of Hydrocyanic acid—or a soluble cyanide.

4th. By the precipitation of the oxide from a solution of the nitrate on the addition of solution of strong caustic potash.

5th. With a solution of Arsenious acid—a lemon yellow precipitate of the arsenite of silver is obtained.

6th. With hydrosulphuret of ammonia or by transmitting a stream of sulphuretted hydrogen gas through a solution of the nitrate, a black precipitate of the sulphuret of silver may be obtained.

As a nitrate it may be recognized—

1st. By the appropiate tests for nitric acid.

No. 5. Oxalic acid.

Known to be an acid.

1st. By its sour taste.

2nd. By turning litmus paper red.

3rd. By forming an insoluble salt with lime, the oxalate.

4th. By its perfect solubility in water.

5th. By being dissipated and volatilized by heat.

No. 6. Sulphate of magnesia.

Known to be a salt of magnesia.

1st. By adding a phosphate of soda, a white precipitate is obtained of the phosphate of soda and magnesia.

As a sulphate—

1st. By giving an insoluble precipitate of the sulphate with a salt of Barytes.

No. 7. Iodide of potassium known to be a compound of iodine.

1st. By striking a deep blue with a solution of starch, the iodide of starch—on the addition of nitric or hydrochloric acid to its solution, or the deep blue may be obtained with starch by means of free chlorine.

Its own peculiar tests are—

1st. Its giving a fine yellow precipitate with the acetate of lead—the iodide of lead.

2nd. Its giving a light yellow colored precipitate of the iodide of silver, on the addition of nitrate of silver.

3rd. Its giving a beautiful scarlet precipitate of the biniodide of mercury, on the addition of the bichloride of mercury.

As a salt of potash, it may be recognized—

1st. By the appropriate tests for potash.

No. 8. Sulphate of copper, known to be a salt of copper.

1st. By striking a deep blue with a solution of ammon:—the ammoniaco-sulphate of copper.

2nd. By throwing down when in solution a light whitish green precipitate of the hydrated oxide of copper, on the addition of a strong alkali.

3rd. By the chestnut brown precipitate obtained on the addition of the fereocyanide of potassium.

Question 6.—The preparation, uses, tests, and doses of nitric acid.

Nitric acid NO^5.

Preparation. Nitric acid is best obtained by heating nitrate of potash with 2 equivalents by weight of hydrated sulphuric acid; in the decomposition which ensues, the nitric acid is given off and condensed in the receiver while the sulphuric acid unites with the potash of the nitrate of potash and forms the bisulphate of potash which remains in the retort, and from which it may afterwards be obtained by washing it out with water.

Uses. Nitric acid is a tonic, antisyphilitic refrigerant, antilithic, and a caustic disinfectant: externally it is employed as local application to bites from rabid animals, as a caustic to warts, excresences, to sloughing ulcers, phagedenic ulcers and sloughing phagedena, as a local application in lepra; as a stimulant it is employed when much diluted as a local application to indolent weak and ill conditioned ulcers, still further diluted, nitric acid may be employed as a gargle in ulcerations of the

throat. In the form of ointment it may be employed in some cutaneous affections; internally, as a tonic, nitric acid has been used in dyspepsia, as an antilithic in those morbid conditions of the urine where a tendency to the phosphatic deposit exists; as a refrigerant well diluted in fevers; as a tonic and antisyphilitic in secondary syphilis where the constitution is much debilitated, has undergone a course of mercury, and the further administration of mercurials is inadmissible. Nitric acid has been much employed in chronic hepatic and biliary derangements. As a dis-infectant nitric acid has been employed for the purpose of fumigating jails, prisons, and work-houses.

Tests. Nitric acid decomposes rapidly and oxidizes metallic copper—gives off fumes of nitrous gas—and forming a blue deliquescent salt the nitrate of copper. With bases it forms salts which deflagrate on being heated with charcoal—combustion quickly ensues on being added to oil of turpentine or phosphorus: When mixed with hydrochloric acid it forms a mixture which decolorizes indigo, and dissolves gold leaf. It stains the stain the skin and wollen cloths yellow; the color being heightened on being washed with soap. The presence of nitric acid in a solution supposed to contain it may also be ascertained by the following test. Add to the solution a salt of iron, green vitriol, and then some sulphuric acid, if nitric acid be at all present, a brownish red line will indicate its presence at the point of junction of the two fluids. Nitric acid is extremely acid and corrosive, possessing the properties of a mineral acid in a high degree.

Doses and officinal compounds. Acid nitric—applied only externally as a caustic, Unguent: Acid: Nit—also for external application—Acid Nit Dil m xx to m xxx three times a day in Decoct Sarz.

C. Doyle.

SURGERY.

Question 1.—Describe the two forms of Erysipelas, their course and terminations, and what treatment you would adopt in each form of the disease.

The two (2) principal forms of erysypelas which demand the greatest attention are the simple cutaneous and phlegmono-cutaneous.

1. *Simple cutaneous.*—In this form of the disease inflammatory action is advanced a few degrees above that of erythema; there is a greater degree of redness, pain, or rather prickling sensation, heat and swelling; the color is that of a fine rosy red, by pressure the part becomes dimpled, and of a pale color; which however quickly vanishes, and the parts recover their previous tint on the removal of the compressing agent. By pressure the capillaries are emptied of their contents, but on removal of the pressure they become refilled, in consequence of the free and unembarrassed state of the circulation. This form of erysypelas may under unfavorable circumstances merge itself into the second variety, but usually the morbid action of the part subsides, and it terminates either by simple *resolution* or by vesication, and desquamation. Serum being effused either externally or internally—when internally there is generally a greater amount of pain and tension.

The constitutional disturbance usually attendant on this form of erysypelas bears in the majority of cases a sthenic and inflammatory

type; there is present a hot skin; quick pulse; scanty and high colored urine; restlessness; loss of appetite; furred tongue, and other evidences of a disordered state of the primæ viæ.

The *treatment* adopted in this variety of erysypelas should in the first place be a strict attention to the state of the bowels and digestive functions. Secondly, to reduce the febrile disturbance, especially when violent; and lastly the local treatment applicable to the case should be resorted to. Unless due attention be paid to the rectifying of the disordered state of the constitution—which may probably have been the original source of the evil then present—the local treatment would prove unavailing and ineffectual. The first indication for treatment is fulfilled by the administration of a purgative, say ℥j of the compound jalap powder in combination with grs vj of calomel. In full plethoric habits it will be sometimes be necessary to exhibit even ℥iss. of the compound jalap powder, after which if the disordered condition of the primæ viæ we may administer the Hyd c creta—or calomel in combination with ext. colocynth. co. The indication for treatment is fulfilled by the administration of saline diaphoretics, either alone or in combination with antimonials. For instance an ounce of the sulphate of magnesia, two grains of tartar emetic, and eight ounces of water may be made into a mixture, of which the patient may be desired to take (3) three table spoonsful every hour or every second hour. The constitution will be thus favorably disposed to the treatment adopted locally, to the consideration of which we now come. Many local measures have been recommended—for instance the dusting of the affected limbs with flour; cold lotions by some, but which are I believe generally considered injudicious as they act as direct repellants, and cause an aggravation of the disorder; leeches may under certain circumstances be beneficial but in general the bites become affected by erysypelatous inflammation and cause its further extension. The most successful plan which I have seen adopted in this Hospital was punctures with the lancet in the most depending part of the limb, so as to permit of the flowing away of serum and liquor sanguinis effused, and this attended with the greatest relief to the patient; warm fomentations, and in some cases the local application of nitrate of silver, so as to blacken the skin and act as a sedative. Some have extended its application so far as to cause vesication, but this practice is not so generally followed.

In ordinary and mild cases of cutaneous erysypelas the treatment I have mentioned will, in general, be quite sufficient. In some cases it will not be necessary to resort to all the measures which I have enumerated. We now come to the consideration of 2nd variety of erysypelas; the

Phlegmono-cutaneous.—In this aggravated form of the disease the morbid action not merely affects the skin, but involves the subcutaneous cellular tissue, and progresses more rapidly towards its termination, and attended with sloughing. The limb which is affected becomes much swoln and of a deeper red; there is a great deal of tension and pain; the limb at times attains to such a size as to be more than twice the size of the sound, and healthy one; the skin becomes so tense and shining as to have not the slightest wrinkle about it; it appears quite brawny. By pressure we may empty the capillaries of their contents to

a certain degree, but they are not so rapidly repelled the circulation being less free and unembarrassed, than in the simpler form of the disease. If the disease terminate favorably it may be by vesication and desquamation; in the majority of cases we can scarcely hope for so favorable a termination as resolution. If the course of the disease be favorable, of course the violence of the symptoms subside and the part returns to a state of healthiness very little inferior to what it was before the period of attack. But if the course be unfavorable, the local and constitutional symptoms become urgent. The morbid action goes on to the destructive and diffused suppuration of the cellular tissue—sloughing ensues—if the *morbid action* continue unabated and progressive it goes on to the destruction of the intermuscular cellular tissue, and muscular tissue becomes involved, fascia, tendons, periosteum and even bone itself does not escape the ravages of the disease: If the symptoms become unfavorable after some local measures such as scarifications have been employed for their removal, the first indications we then have of this untoward tendency, is the dry, swoln, and gaping condition of the wound, from which shreds of dead cellular tissue separate, and come away with the forceps. Not unfrequently during the progress of the disorder, a part primarily affected and recovering itself again becomes attacked, for instance the lower eyelid, and suppuration becomes established—generally circumscribed, at times diffuse.

The constitutional and febrile disturbance as really attendant on this form of the complaint are generally of a low, asthenic character: The prima viæ is general much disordered as evidenced by the furred state of the tongue, confined state of the bowels, and headache.

The concomitant febrile disturbrance, may either be, 1, bilious antecedent to the complaint: 2, inflammatory, accompany or antecedent, and 3, constitutional irritation—hectic, a tendency to collapse and low typhus accompany the latter stages of the disorder.

The treatment. We bear in mind the indications for treatment in the simple form of the disease—at the same time with the knowledge that we have to attack a much more formidable malady.

We correct the state of the prima viæ by purgatives—as cal and jalap, emetics, and mercurial alteratives. The febrile disturbance is reduced by means of saline diaphoretics and antimonials:—and in the latter stages of the disorder when it assumes the typhoid type, we should administer stimulants—as quinine, beer, ammonia, and opiates to allay the restlessness.

The local measures to be employed are 1st the most important—Incisions with the scalpel, and which should never be too long or numerous, but such as emergencies of the case may demand. The benefits of this mode of treatment will be soon rendered apparent by the gradual subsidence of morbid symptoms. *Fomentation* may be employed to favor the bleeding—and poultices to favor the extrusion of pus, but neither fomentations nor poultices, should be long continued as they are then more apt to do harm than good The local application of the nitrate of silver is also here very beneficial. Mr. Liston recommends the administration of aconite in small doses at first and to subdue the reaction small after doses of the extract bellodonna—a lotion of the sulphate of iron, or an ointment of the sulphate is recommended by Velpeau.

Question 2nd. Describe the different dislocations of the shoulder-joint, and the mode of reduction.

The chief dislocations of the shoulder-joint are four (4), viz.

1. Dislocation downwards of the head of the humerus into the axilla.
2. Dislocation forwards.
3. Dislocation backwards.
4. Dislocation (partial) upwards.

The first form of dislocation is the most common, namely, that into the axilla.

Symptoms.—The arm drawn away from the side, and cannot be drawn towards it, but with great pain; a lengthening of the limb; and the presence of the globular head of the humerus in the axilla; there is usually present great pain, from pressure on the axillay plexus of nerves, the arm cannot be raised—there is a flattening under the acromion; and the patient usually presents himself, supporting the fore-arm of the affected side, with the hand of the sound limb.

There are five methods of reducing this dislocation.

1. By the heel in the axilla.
2. By extension with the hand simply.
3. By extension with pulleys.
4. By extension with the arm resting on the knee.
5. By extension sitting behind the patient.

1. The patient is made to lie down on his back on a bed—the surgeon seats himself on the edge of the bed, near to the affected limb, places his heel (without the boot) into the axilla of the patient, and makes extension from towards himself as if it were. The reduction is followed by the disappearance of the head of the humerus from the axilla.

2. The patient is seated in a chair—the scapula and shoulder is fixed, and extension is made forwards and upwards by the hand.

3. The patient being seated in a chair—the scapula and shoulder is again fixed,—a cloth is rolled round the limb (which is wetted to preserve it from injury) a sheet is then fixed to the limb itself, and made into a close hitch, it is then attached to the pulley, extension being made steadily and continuously by others: the surgeon standing near the patient to watch the progress of the reduction.

4. Or the patient having seated himself, the surgeon places his foot on a chair, and bends the arm as it were over his knee.

5. In this mode of reduction the surgeon sits behind the patient, who lies down, and draws the head of the humerus gently into its proper cavity.

There are some other methods resorted to such as letting the patient hang by the weight of his body, the surgeon standing on a table, and supporting him by the hand,—this relaxes and fatigues the deltoid, the reduction then becomes easy: or by making the patient lift a weight in his hand for some time over his head—the same results and by the same means are effected.

2nd. Dislocation forwards.

Symptoms—The arm thrown backwards on a plane posterior to the body—shortening and immobilty of the limb—a flattening of the shoulder; the head of the humerus rests below the clavicle, and near the first rib—there is less pain in this dislocation than in the preceding one.

Reduction may be effected by making extension of the limb backwards and downwards:—the dislocation is known to have been reduced by

the disappearance of the symptom, and the natural fulness of the shoulders being present.

3. Dislocation backwards :

Symptoms—The arm shortened thrown forward, a flattening of the shoulder and immobility of the limb ; in this dislocation the head of the bone rests on the dorsum of the scapula and in thin persons may be felt. *Reduction* is best effected by making extension *forwards*, and downwards.

4. Dislocation upwards—this is a partial dislocation in which the head of the humerus is thrown off partially from the glenoid cavity ; in this dislocation the limb is very little shortened, it is drawn to the side, and there is a slight unequality of the prominence of the shoulder. There is another dislocation attended I believe with a rupture of the tendon of the biceps in which the utility of the limb as regards motion is much lost.

Question 3. Describe the operation for amputation at the shoulder joint.

The instruments are to be all laid out, and ready at hand, and under the surgeon's eye, such as forceps, tenacula, scissors, &c. ligatures, sponges, lancets, and water, and with most essential chloroform. The assistants are selected, and the patient takes a catline (long) passes it on the right shoulder from near acromian, passes it down into the posterior fold of the axilla, cuts downwards and outwards, and makes a posterior flap of the greater body of deltoid. The flap is then drawn up by the assistant, the head of the limb is rotated outwards, the blade of the knife is then passed horizontally so as at the touch to divide the capsular and other ligaments, and by one sweep downwards the anterior flap should be made. Previous to which the artery should be secured by an assistant or pressure may be made on the subclavian or the head of the first rib. The arteries are to be tied, flaps brought together connected by sutures, and straps of stickey plaster placed between them. The patient may then be removed to bed : after the ligature has been cut, one should be permitted to hang out of the wound.

Question 4.—What are the symptoms of a foreign body in the trachea ? What will you do to relieve them ?

The symptoms which indicate the existence of a foreign body in the trachea, are a sense of uneasiness, and irritation about the throat, a dry hawking cough at first ; and the recurrence of paroxysms of dyspnœa, attended with all the most urgent symptoms of suffocation ; such as a livid and congested countenance, starting eyeballs, &c. On the application of the stethescope, the evidences of its existence are placed beyond doubt, by the sound imparted to the ear as the foreign body ascends and descends in the trachea ! These symptoms may last for some time, and the patient be ultimately carried off in a fit of suffocation : or almost immediate suffocation may ensue on the entrance of the foreign body into the trachea, and the patient be as suddenly carried off. In a case coming under observation like the last, the only thing that can be done is to perform the operation of tracheotomy : The patient is to be seated in a chair, with his head thrown well back and supported by an assistant, an incision is to be made about an inch and a half in length and carried down towards the sternum, this incision should be carried down through all the textures till it comes to the trachea. The inferior thyroid and external jugular veins should be avoided as much as pos-

sible. Much mischief might be prevented by having the back of the knife directed towards the sternum. The knife should then with a cautious jerk be made to penetrate into the trachea and an opening of sufficient magnitude be made to admit of the introduction of the forceps to extract the foreign body: Sometimes the body itself will jump out with a jerk. In some cases that admit of any delay, the patient should be placed on a peculiar table adapted for the purpose, and which may be suddenly overturned—this method has I believe in one case been attended with success.

Question 5.—What are the symptoms of an aneurism? What may an aneurismal tumor be mistaken for? How is it to be distinguished from the diseases which it resembles?

An aneurism is a pulsating tumor situated near an artery and occurring either slowly, or suddenly with a jerk cognizable by the patient: at first it is small and soft, afterwards larger and more solid; in the earlier stages becoming diminished in size and flaccid when pressure is made between it and the heart, in the latter stages this is not so apparent; the sound heard in an aneurismal tumor on the application of the stethescope is said to be a "bellows sound;" according to its situation does it give rise to various morbid symptoms; if in the chest there is dyspnœa, and difficulty of breathing &c. and if in the neck and in the vicinity of the œsophagus to difficulty of swallowing; when an aneurism occurs in the larger blood vessels near the heart, the circulation becomes embarassed—cerebral symptoms manifest themselves, and the patient may become comatose.

If situated in a limb, the aneurism by its pressure on the nerves may give rise to pain and numbness, and if on the principal venous trunk to œdema. These are the symptoms of an aneurism with those derived from its presence. The question does not seem to require the different stages of an aneurism. An aneurism may be mistaken for a tumor.

A tumor situated on an artery.

For hernia.

For Psoas Abscess.

It may be distinguished from a tumor situated on an artery. By the mode of its growth, being at first soft, and small, afterwards becoming larger and more solid. By becoming small and *flaccid* on pressure being made between it and the heart, and by its suddenly refilling when the pressure is removed.

By the bellows sound.

A tumor is at first *hard* and afterwards becomes soft.

It is not affected by pressure being applied between it and the heart, except that it receives a less impulse from the artery—it does not become either diminished in size or *flaccid*.

It may be lifted completely away from off an artery.

A hernia is influenced by the action of the abdominal muscles.

If reducible, returns into the abdomen on lying down.

Psoas abscess occurs almost invariably in weak and debilitated constitution, a sense of fluctuation can be perceived in it.

Question 6.—How would you treat a wound of the artery at the bend of the arm occurring in venesection?

By applying a bandage—commencing by finger bandages at the fingers, then around the hand, and along the whole of the arm—and by

placing a graduated compress on the wound itself—a coin may be added to make the pressure more secure and permanent. In a wound of the artery attended with the formation of a thrombus—it has been recommended to cut into the artery, allow the contents to escape, and place a ligature both above and below the wound.

CHRISTOPHER DOYLE.

MIDWIFERY.

What are the varieties of puerperal convulsions, the symptoms, pathology, and treatment of each?

Varieties.—We have described in books 4 varieties of puerperal convulsions, viz., the epileptic, apoplectic, hysterical, and anœmic, but, we have been told, that practically there are only 3 varieties, the apoplectic being left out.

Symptoms.—1. Of epileptic or true puerperal convulsions. Of the premonitory symptoms.

These are in many respects allied to those so frequently noticed prior to an attack of apoplexy.

Sometimes we may notice, (or the patient does so herself,) a loss of memory, her speech sometimes falters, or words are left out of a sentence, or they may be transferred out of their proper position in the sentence.

At other times a fixed pain is complained of in some part of the head, the fingers have been noticed to tremble, and objects cannot be held firmly, or there may be fear and despondency.

Symptoms during the attack.—Convulsions may occur during any period of utero-gestation, and even after labour, but they most frequently come on at the commencement of the 2nd stage.

The attack is sudden, and very frequently unexpected either to the patient or the friends at her bed-side.

The spasms are general, every muscle is violently contracted—the features are horribly distorted, the face turgid with blood—the tongue is often protruded and severely wounded by the clenched teeth—the pulse is not much affected with regard to frequency, but it is generally full and incompressible, and the skin is warm.

In about ten minutes the convulsions cease, and the patient lies quite calm. Very often she is completely insensible during the interval, and it is said that the more complete the insensibility the more unfavourable our prognosis, but frequently she is able to answer questions rationally, but has no recollection of what has just occurred. Those around her think that she has completely recovered, but soon they are undeceived, and, again and again is the same scene acted after irregular intervals.

During all this, labour may proceed and be completed without it being noticed. The child has been found smothered beneath the bed-clothes, and the woman perhaps endeavouring to remove something from between her legs. A common epileptic fit occurring during labour may be distinguished from this form, by the symptoms and general appearance of the patient, and particularly by the previous history.

The pathology of true puerperal convulsions is still but imperfectly understood. It seems in many respects allied to apoplexy, for although in apoplexy we seldom have convulsions, still the circumstances in

which both occur—the habit of body, short neck, fully developed chest, plethora, &c., the full labouring pulse, the puffy, slow breathing, &c., and the treatment required.

There is a close connection between the state of the uterus and these convulsions. We find that the convulsions commence with the 2nd stage of labour; when the membranes burst and the head impinges on the os uteri. It has also been noticed that the convulsions very generally cease when labour is completed.

Too great ossification of the child's head, a tendency to inflammation of the uterus, or irritation about the ovaries, &c. have also been found in connection with puerperal convulsions, but whether there is any cause and effect of relation between these and the disease, I cannot say.

Post mortem examination has not disclosed any inflammatory affection of the brain, spinal cord, or their membranes.

The occurrence of labour and its completion during the seizure, would lead us to expect that the spinal cord was not implicated.

That the brain is affected there is no doubt, but there seems to be mere congestion and not inflammation.

There is seldom any rupture of blood vessels—if this should occur we might truely call it an apoplectic puerperal convulsion. Paralysis, general or partial, has seldom been noticed with puerperal convulsions.

We might expect to have the pathology of this kind of convulsion explained by Marshall Hall's true spinal or reflex system but at present it is very obscure. Treatment of epileptic or true puerperal convulsion is often very satisfactory. Those ignorant of this would suppose that the disease, apparently very formidable, would frequently prove fatal.

During the convulsion we merely prevent the patient from doing herself harm, keep her head elevated, and place a padded piece of stick in the mouth to prevent the tongue from being wounded.

When she becomes calm, we are more active. Venesection is very generally required in this form of puerperal convulsions, a full and free bleeding so as to effect the pulse, and this may be repeated in a few hours if it seem necessary. We must be guided according to circumstances—if the pulse continues full and the convulsions unalleviated, we may bleed again.

Local bleeding—leeches or cupping glasses are recommended to be applied to the head, and they are often useful, particularly if the scalp feels hot—cold lotions may also be applied and the head shaved, of course we must not do this last unnecessarily.

Purgatives, particularly the drastic ones and those which seem to derive from the head. If the patient is insensible, we can drop croton oil on the tongue, mixing it with calomel, or if the patient can swallow, being sensible, we give calomel gr. x. and jalap grs. x. to xv. followed in about 4 hours by sulphate of magnesia and senna—if in 8 or 10 hours the bowels have not been freely opened an injection can be administered of castor oil and turpentine each ℥j with a pint of warm water or conjee, the senna draught may be repeated and mercury be administered in the same or in another form.

Supposing labour has been completed and the convulsions have been relieved to a very great extent, the treatment is much the same but less severe.

We now give calomel or blue pill with colocynth and camphor—opium may now be used with safety if the symptoms require it, if the patient is exhausted and obtain no sleep, keeping the bowels freely open.

If the convulsions continue in a very severe form, and the fœtus has not been expelled, we must bring on labour, for as I have said when the uterus has been emptied, the convulsions often cease.

During the attack it is well to know whether labour is proceeding, but we must not constantly be making examinations for the convulsions seem to be increased and convulsions have even come on, while the inner surface was being irritated, when before there was no sign of them.

The removal of the fœtus being our last resource, how are we to bring on this desirable event?

The operation of turning has been advised, but it is dangerous.

It is a difficult operation, particularly if the liquor amnii has been expelled, the os is undilatable, and the uterus acting and above all it requires great handling of the uterus, which aggravates the disease.

We therefore endeavour to bring on labour by evacuating the liquor amnii, and using the long or short forceps according to circumstances.

If this form of convulsion occur either before or after, our treatment is less severe but on the same principles. The diet is at first always low, but after recovery tonics and even stimulants may be required.

Hysterical convulsions occuring during the puerperal state differs in no respect from hysterical fits.

The pathology of this disease is always obscure, unlike the epileptic form, it generally occurs if not in anœmic at least in weak, unhealthy or cachectic states of the frame.

It may and often does depend on a deranged state of the genital organs, or upon spinal irritation. The moral and physical circumstances connected with labour, often excite the disease at that period. The *symptoms* are those of a common hysterical fit—they may be distinguished from the former, by the alternate fits of laughing and crying, by the insensibility never being complete, the answers being rational, the pulse and respiration being calm. By the previous history of the case, the appearance of the features and the convulsions being less violent, &c.

Treatment of the hysterical form.—In this form depletion is never borne to any extent.

We treat the case as we would a common hysterical fit. Use the cold douche to the head and administer stimulant antispasmodics—such as the ammoniated tinc. of valerian, tinc. of assafœtida, ℥ss. to ℥; āā, tinct of opium gtt. xx. or ℥ss, camphor mixture ℥j and repeat this if necessary—injections may also be used containing the same substances.

3rd form—Convulsions occurring during the puerperal state connected with anœmia.

It is well known that when an animal is bled to death, convulsions generally precede the termination of life; this form of puerperal convulsions seems to depend on the same pathological state—the convulsions being probably augmented by their occurring during labour.

Symptoms cannot be mistaken for those of any other variety especially of the first. The patient bloodless and exhausted either from hœmorrhage or other exhausting discharges.

Her face and lips are pale—the extremities cold, perhaps œdematous—skin cool and often moist—the pulse, that of exhaustion very quick 100

or more and feeble, there may be slight delirium but generally there is not, the patient is sensible when the convulsions are not present and she is often very restless.

The treatment is just the opposite to that for the first or epileptic form. We administer stimulants with nourishing diet in quantities that the stomach and brain will bear; and stimulants have been given in very large quantities; we gave small doses of brandy and eggs and brandy and sago, a spoon full every 10 minutes or ¼ of an hour, taking care never to use depletion nor severe purgative. Of late it has been noticed that albuminuria is a frequent concomitant of puerperal convulsions.

When it occurs in the epileptic form we might expect it to be transient—and it has been found to be so—but when it occurs during the anœmic state we might infer that it has been productive of that state.—I know not whether the urea retained in the system has any effect in predisposing to convulsions.

JAMES HINDER.

MEDICINE.

Answer to Question I.—The causes of Asthma are often very obscure.

1. A close connection may often be traced between valvular disease of the heart and asthma, particularly the congestive form.
2. Sometimes with organic disease of the brain.
3. With incipient pthisis.
4. With long continued dyspepsia—this is said to be a common cause.

Very frequently no cause can be detected—the patient in the interval enjoying at least a moderate degree of health—even indigestion not being present.

Symptoms—Asthma is a disease which comes on in paroxysms.

There are three varieties.

Humoral, congestive, and spasmodic.

1. Humoral asthma.

In this form of the disease the paroxysm generally comes on in the evening.

It comes on with some slight difficulty of breathing which gradually increases—the respiration becomes hurried—the pulse somewhat quickened.

The patient endeavours to breath freely but finds he cannot—he expands his chest as much as possible.

The sounds heard in the chest are not pathognomic of the disease—there may be a slight mucous rale—or bronchophony—these symptoms continue for eight or ten hours, when the patient is relieved by a copious expectoration of frothy mucus.

This is but one paroxysm—the patient in the interval feels pretty well, and is not obliged to discontinue his ordinary avocations.

2. Congestive asthma is closely allied to the former variety. The symptoms come on in much the same manner, and the dyspnœa as in the former case sometimes increases to such an extent that the lips and face become of a livid hue and the distress is extreme.

3. Spasmodic variety.

Here are the symptoms are even more marked than in the former varieties the patient bends forward gasping for breath the countenance is livid, the chest expanded, every respiratory muscle is in action and still sufficient air cannot be carried to the lungs. On examining the chest we at times cannot distinguish any peculiar sound and if the patient is told to inspire air gradually we hear the vesicular murmur,—but at other times we can hear a distinct cooing sound in the different modifications of it.

Sometimes at a few yards distance we can hear the noise the air makes in its passage down the constricted bronchial tubes.

Diagnosis. The disease might be mistaken for Pulmonary Emphysenia, but in this affection the patient can never breath freely; his countenance always has a livid appearance although the dyspnœa might be increased by exertion.

Prognosis. Patients have been known to live to "a good old age" although they have suffered from Asthma, but it generally shortens life. If we can discover any organic disease of the heart our prognosis must be unfavourable. But when we can discover no organic disease and only derangement of the stomach is present, and when the paroxysms are few and far between our prognosis may be favourable—but still we must not tell the patient he can be cured, for the disease is a most obstinate one.

Treatment.

Asthma—if uncombined with inflammatory disease does not require active antiphogistic measures.

During the paroxysm we give antispasmodics—Inhalation of ether, not to an extent that would produce anœsthesia, and merely to relax the bronchial tubes. The compound tinc. of valerian may also be given internally, and hydrocyanic acid.

During the intervals we pay particular attention to the digestive organs giving purgatives and alteratives afterwards tonics. The inhalation of the smoke of various antispasmodics, particularly tobacco, has been attended with benefit.

Answer to Question II.—1. The causes of Ascites.

I may first state that any condition which retards the flow of blood through the Vena Cava Inf: is likely to produce Ascites.

(A.) Organic or structural changes in the liver. The ancients supposed, that this was the only cause, although the assertion is not correct, still organic change in the liver is a most frequent cause, and particularly that change, which has been called "Granular liver." It is said to be produced by chronic inflammation of that organ; this produces an hypertroply of the cellular tissue connecting the lobule "Glisson's Capsule." When the inflammation has been reduced the hypertrophied tissue contracts, presses on and thus produces atrophy of the lobules and their constituent vessels.

Hence the blood in the ramification of the Vena portæ is retarded and we have Ascites—generally accompanied with Œdema of the lower extremities.

(B.) Disease of the spleen, (enlargement) as a cause is most frequently combined with disease of the liver.

Both these states often follow the intermittent and remittent forms of fever, as met with in Bengal.

(C.) Granular degeneration of the kidneys—where we have it sometimes combined with Anasarca, but here it may be and often is absent.

(D.) Tumours, Aneurismal or otherwise, pressing on the Inf. Cava sometimes produce Ascites.

(E.) Diseases of the heart or lungs.

We may commence with the left side—pass on to the lungs and thence to the right side of the heart. We more frequently find it accompanying this last, as it is more closely connected with the Inf. Cava it sometimes accompanies. Tubercular consumption, and Senile Catarrh, more rarely disease of the valves of the left side of the heart.

(F.) Sometimes ascites seems to proceed from chronic peritonitis.

2. The symptoms of Ascites are in general very conspicuous.

The patient having previously suffered from frequent attacks of fever, or from other disease—and being generally more or less emaciated—notices a gradual enlargement of his abdomen. He is, most commonly, seen at an advanced stage, when the belly is more or less tense and fluctuation very distinct. When the serum has been effused in great quantity it produces various disagreeable symptoms.

The pulse is generaly feeble and quick, but it varies with the state of the system, the tongue is more or less foul, appetite indifferent, bowels are almost always confined, stools being scanty and foul, but sometimes there is diarhœa. Urine is often scanty particularly in the latter stages; if it is scanty or otherwise but lower in sp gr than natural and contain albumen we may suspect, combining this with other general symptoms, that granular degeneration is present.

When the effusion is extensive, it presses upwards against the Diaphragm and produces more or less dyspnœa which is sometimes so distressing that the patient is obliged to sit up: by this he relieves the pressure from below.

Fever is sometimes present, but more generally the skin is cool and dryness.

When the patient is very low there is often Œdema of the feet and legs, and coldness of the extremities.

If there is enlargement of the liver we may feel it in the right hypochondrium, and chiefly when the abdomen is not much distended; percussion also gives a dull sound high up in the right side of the chest—so also in enlargement of the spleen.

The superficial veins of the abdomen are very frequently distended and sometimes to a great extent.

We may in other cases be able to discover by physical signs, diseases of the lung, generally pthisis, or of the heart and particularly of the right side. But often we will be disappointed and be able to discover no organic lesion likely to produce ascites.

3. Diagnosis is almost always easy. It may be distinguished from ovarian dropsy by the latter beginning at one or other side and low in the lumbar or iliac regions—and by its being particularly at first, more or less circumscribed; the causes of ascites being of a depressing nature generally the patient is more likely to be found enfeebled by long continued disease and above all fluctuation is much more distinct: from tympanitic distension, by the hollow drum-like sound produced by percussion.

From pregnancy—by the changes in the os and cervex uteri, by the enlargement from below upwards—by the placental bruit and sound of the fœtal heart, (when pregnancy is advanced) and by other general

symptoms being absent—but one must remember that utero-gestation may proceed when ascites is present—fluctuation here also is a valuable symptom.

But sometimes the diagnosis becomes extremely difficult—undefined tumours are more perplexing when they occur in the abdomen than in any other part. Fallopian conception may be instanced, the most anamolous symptoms being at times produced by it.

4. Prognosis—must always be guarded.

If we can discover the cause of the disease we can be more certain.

If the system is not very low, if disease of the liver or spleen seems to produce the dropsy—and the abdomen does not rapidly increase in size after tapping or other evacuants have been used, the patient may live it may be for years, but still suffering from disease. But when it arises from organic disease of the kidneys, of the valves of the heart, or during the progress of pthisis it is almost always unfavourable, for it generally shows itself in the last stages of these diseases.

5. Treatment.

If it is practicable we direct our attention to the causes of the disease. It is impossible at the present time to enter into the treatment of the various diseases which ascites is a symptom of.

When we are unable to follow the above indications, we use other means—they are principally evacuants and tonics—or we may combine the two, endeavouring to remove cause and effect at the same time.

In speaking of evacuants I may mention that we should not use those for a length of time which excite one class of organs—thus we must not constantly use purgatives, &c.

Of purgatives—the severe or drastic purgatives are preferred, because they remove a large quantity of the serum of the blood—thus elaterium and gamboge are frequently used, or we may combine a diuretic and purgative as jalap and squills. Nature sometimes take this method of removing the accumulation of fluid, by setting up a profuse diarhœa but on the cessation of the diarhœa the ascites generally returns.

In using purgatives we may often be guided by the feelings of the patient.

Sometimes they give so much relief that patients will ask again and again for them—at other times they produce the greatest distress and depress the heart's action to such an extent, that we are obliged to discontinue their use.

Diuretics may be combined with purgatives or given alone. The bitartrate of potash is a very useful medicine given 3 or 4 times daily, or every morning. Digitalis may be given but with caution—squills is also applicable or other diuretics combined in various forms according to the judgement of the practitioner.

Diaphoretics can be used with the greatest benefit when more active means cannot be resorted to. Antimonials cannot often be prescribed because they depress the system too much—we therefore use those of a more tonic nature—the compound ipecacuanha or Dover's powder is a very good form—a larger dose being given at night as grs. x and grs. vi. during the day. The vapour bath has also been used with benefit. During a course of diaphoretics the patient must put on warm clothing and keep in an equable temperature.

During the treatment we must endeavour to improve the patient's general health.

We may use the mineral tonics—(particularly the ferruginous preparations) combining them if thought necessary with diuretics.

When the liver has been enlarged or the spleen—the iodide of potassium may be given combined with the syrup of iodide of iron and the syrup of sarza.

The diet is to be carefully regulated and substances which are at the same time nutritious and easily assimilated are to be preferred. Our last resource, after having used the means detailed above, is tapping. When we find the fluid pressing up into the thorax and great dyspnœa present, the belly tense and greatly distended, we are obliged to tap the patient.

Having passed a broad sheet round the abdomen—we give it to an assistant who stands behind the patient—we then pass in a trochan and canula either midway between the umbilicus and pelvis or midway between the ant. sup. spine of the ilium and umbilicus.

While the fluid is being evacuated the patient tightens the bandage—when the operation is completed we accurately close the opening. If the pressure described above was not used the sudden removal of the fluid would produce perhaps fatal syncope, the vena cava having lost its long continued support. Some have advised strapping the abdomen with sticking plaster as used in treating indolent ulcers and successful cases have been related.

If the dropsy were merely dependant (as it sometimes is) on an impoverished state of the blood it might be successful.

JAMES HINDER.

MEDICAL JURISPRUDENCE.

Morning Paper.

Answer 3rd.—The symptoms occasioned by corrosive sublimate are divided under three heads by Dr. Christison.

1*st.*——In the first class of cases, the symptoms are all indicative of severe irritation and inflammation of the alimentary canal.

2*nd.*—In the second set of cases the symptoms at first are just the same as in the first class, but in the latter stage they become united or succeeded by the symptoms of mercurial erythism in one or other form.

3*rd.*—In the third class of cases the symptoms, from the commencement, are those of mercurial erythism in one or other form, and the symptoms of irritation and inflammation are either altogether wanting, or there may be trivial vomiting and slight pain at the pit of the stomach.

With regard to the progress of the symptoms

Of the 1st Class.—Symptoms produced by this poison when taken in excess generally come either immediately after the poison had been taken, or even in the very act of swallowing. In the first place the patient experiences a strong styptic metalic taste, often described to be a *coppery* taste, in the act of swallowing, attended with a sensation of constriction in the throat, almost amounting to suffocation; and a sensation of burning heat, extending from the fauces down the stomach. After a short time this pain becomes much aggravated in its intensity, and more

so when pressure is applied to the abdomen. On account of this the patient generally lies on his back, with thighs flexed on the pelvis to avoid extension. As the case advances the abdomen becomes tense and tympanitic. At this period the pain and heat are likened by the patient to a burning fire within him; concomitant with pain, nausea generally appearing followed by retching and severe incessant vomiting; the vomited matter at first is generally the contents of the stomach, then it becomes either slightly tinged with blood or mixed with large quantities of it, generally the latter. Soon after this profuse diarrhœa sets in; generally of a dark colour, owing to the mixture of altered blood with the fœces, the anus is often excoriated and protruded, patient quite restless and has an incessant desire to drink. Besides the symptoms of irritation in the alimentary canal, there are symptoms indicating irritation in the windpipe, such as hoarseness, difficulty of speech, pain &c. Urinary organs are often affected, characterised, by severe pain in the region of the bladder, swelling of the glans penis, and occasionally total suppression of urine. A case of such a nature occurred at Guy's Hospital, where the patient lived four days but did not pass any urine during this period. After these symptoms being completely insisted for some time, convulsions appear, they are more severe than seen in cases of arsenical poisoning. General system also sympathises with these symptoms of irritation, that is to say when diarrhœa appears, pulse becomes quick small, and irregular, face generally flushed and swollen, sometimes pale and pinched, skin first warm but afterwards bedewed with cold perspiration, breathing difficult, short, attended with long intervals; as the case advances, skin becomes quite cool, bathed with cold sweatings. During the latter stage coma sets in and patient expires thus comatosed, or death takes place during a fit of convulsions.

Progress of the symptoms in the second class of cases. The symptoms of this set of cases are divided into two stages. Symptoms of the first stage are those of the irritation and inflammation of the alimentary canal already described. Symptoms of the 2nd stage are those of mercurial salivation, (generally) these symptoms generally begin when the symptoms of the first stage recede, but sometimes earlier. Christison says generally on the 2nd day, and seldom delayed beyond the 3rd day,— Symptoms of the second stage are those of inflamation of the organs in, and adjacent to the mouth, especially of the salivary glands, which become swollen and painful, saliva is secreted in abundance, it is thick, vicid, with a peculiar bad smell, tongue at the same time becomes red swollen and painful; gums red, spongy, often ulcerated; fœtor of breath; occasionally blue lines are seen at the margins of gums resembling much those produced by lead. Sometimes there you find a low form of fever, particularly of the case survives longer.—Mercurial tremors, &c., &c.

With regard to the progress of the symptoms in the 3rd class of cases, little can be said, for there are little or no symptoms of irritation in the alimentary, but the patient is chiefly harassed by the inflammation of the organs in the mouth, characterised by the symptoms already noted under the head of the 2nd class of cases. Mercurial tremors, palsy low fever, marasmus &c., are more or less present. Such cases survive longer than those of the 1st class of cases.

Port Mortem Appearances.—Should the poison be proved fatal quickly, then the mouth will be found red and inflamed, excoriated, and so the œsophagus.—The stomach is the chief seat where a medical man will find most marks of inflamation,—The mucous membrane is sometimes found white, raised, and excoriated, often reddened of different shades of redness, from brick red to scarlet,—sometimes the corrosive sublimate may be found sticking to the ulcerated membrane, marks of inflamation may be found in the intestines also—The stomach is often found contracted and shrivelled,—perforation of it is a rare occurrence,—bladder may be found empty, contracted, and inflamed.

Treatment.—Our first object should be to neutralise the poison by the administration of large quantities of *albumen*, the chemical antidote for corrosive sublimate, which forms an insoluble, and hence inactive compound with albumen,—for this purpose both yolk and white of eggs may be given with milk, or water, in its absence.

Gluten is also recommended; it may be obtained by washing flour, enveloped in a piece of thin cloth: our next indication should be to remove the poison; for this purpose, the stomach pump is the best means we possess or in the absence of *the* instrument, we may give emetics, assisted by large drinks and by tickling the fauces by a feather—If we succeed by these means then we should allay the inflamation of the stomach and intestines by leeching and even general blood letting if necessary,—well fomenting the part, low diet &c.

Distinction between the cases of poisoning by corrosive sublimate and arsenic.—

1. The symptoms in cases of corrosive sublimate come on immediately after the poison has been swallowed or even in the very act, for irritation immediately begins in the fauces on account of the corrosive nature and metalic taste of the compound. A person can scarcely take it without experiencing its taste,—this is not the case with arsenic for it has no taste, and the symptoms produced by it are seldom commenced until half an hour is elapsed.
2. In corrosive sublimate, bloody vomiting and purging are more frequent than in arsenic.—
3. Suppression of urine is more frequent also in cases of corrosive sublimate than in arsenic.
4. The face is generally flushed, bloated, and swollen in cases of mercury, not so in cases of arsenic.
5. Cases of poisoning by corrosive sublimate are more easily cured than those of arsenic.
6. Convulsive fits are rare in arsenic, but frequently seen in the mercurial compound.
7. Remission of symptoms during their progress are frequently seen in cases of arsenical poisoning, but very rarely so in corrosive sublimate.
8. Inflamation of the salivary glands and profuse salivation are very frequently a symptom of corrosive sublimate poisoning, very rarely occurs in arsenical poisoning.

Answer 4th.—Tests for Arsenic.

Solid.—1. It is a white, porcelain like, heavy substance.—2. It is scarcely soluble in cold water, but if boiled it becomes partly dissolved, and part of it either remains floating on the water, or it becomes precipitated

under it.—3. It is volatalised completely by heat, in this property it resembles corrosive sublimate.—4. When a little of it is thrown in a watch glass containing hydrosulphuret of ammonia, it remains unchanged, but if heated and ammonia expelled, then a yellow precipitate of golden sulphuret of arsenic forms ; this character of not being precipitated by hydrosulphuret of ammonia distinguishes it from other metals.—*5.* If heated in a tube 3 inches long about $\frac{1}{8}$ of an inch in breadth, with black flux or charcoal (ignited) it is reduced to the metalic state, forming a ring of a steel gray colour having a bright lustre,— which when heated and chased from one place to another becomes oxidated, and crystallises in octohedrons of arsenious acid.

Liquid Tests.—1. *Ammoniaco Nitrate*, of silver gives a yellow precipitate with arsenious acid,—but ammoniaco nitrate of silver also gives a yellow with phosphoric acid and alkaline phosphates ;—they are at once known by not being acted on by sulphuretted hydrogen gas.

2. *Ammoniaco Sulphate of copper* gives a beautiful grass green precipitate, but salts of uranium give also a similar precipitate by it, and a yellow with sulphuretted hydrogen, but uranium will be at once known by giving a yellow also with ammonia, with which arsenic gives nothing,— and being also precipitated immediately by hydrosulphuret of ammonia.

3. *Sulphuretted* hydrogen gas, when passed through an acidulated solution of arsenious acid, cause a heavy deep yellow precipitate,— this precipitate is known by the following properties,—1. It is soluble in caustic potash and ammonia.—2. Insoluble in water, alcohol, and in all mineral and vegetable acids.—3. If heated with black flux in a reduction tube it gives a metallic ring of arsenic, which can be completely reduced to arsenious acid in octohedral crystals, giving at the same time an odour resembling somewhat to that of garlic.

But there are many objections to that test,—1. Cadmium gives a yellow also with sulphuretted hydrogen,—but this precipitate is soluble in muriatic acid and insoluble in ammonia, contrary to that of arsenic. and besides salts of Cadmium are also precipitated by hydrosulphuret of ammonia.—2. Tin also gives a dirty yellow precipitate,—but this precipitate is not reduced to the metallic state by heating it with charcoal, &c. and besides it is insoluble in ammonia ;—and tin is also precipitated by hydrosulphuret of ammonia.—3. Antimony gives a golden red colour, it can be scarcely be mistaken, besides it is also acted on by the hydrosulphuret ; besides these tests there is a galvanic test, it is of very little consequence.

Marsh's test.—It consists in disengaging hydrogen by the action of sulphuric acid and water on zinc, introducted into a phial, which also contains a little arsenious acid (purposely added) or any such liquid suspected to contain it : should there be any quantity of arsenic present, hydrogen combine, with it forming arsenuretted hydrogen, which burns with a dense pale blue and white flame : secondly, when a piece of China or tube is held upon the flame, it receives a stain of metallic arsenic, of a high lustre and of a steel gray colour, and thirdly, if a drop or two of nitrate of silver be applied to the stain and this touched by a rod dipped in ammonia, then it immediately strikes a yellow precipitate, the yellow arsenite of silver. There are different modifications of Marsh's test, but I don't think that the time will allow me to go through them in detail, so I am obliged to leave them here unmentioned. This is a very good means of

detecting arsenic; there is only one objection to this test, but it is of no consequence: the objection is that antimony also gives a stain very similar to that produced by arsenic, but the former stain will at once be know by not being acted on by ammoniaco nitrate of silver, and hence it is not an objection at all; there is another objection that arsenic may be in the acid and zinc used, but this may be removed by testing the hydrogen evolved previous to the addition of suspected solution.

Reinsch's Test.—It consists in boiling the suspected liquid acidulated with muriatic acid, and plates of fine polished copper; should there be any arsenic, then it is depositted on the copper which may be collected and heated in a reduction tube, and should the deposit be arsenic, then you will find the metallic ring and prove that arsenious acid, which may be dissolved in boiling water and tested by, 1. Ammoniaco nitrate silver, 2. Ammoniaco sulphate of copper, 3. Sulphuretted hydrogen water. But there are objections to this test, that, 1 Mercury is deposited also on copper in similar condition but it will be at once known by the globular form in which mercury is deposited, 2 Tin, zinc, antimony, &c., gives also stains on copper, but the answer to all these objections is one, that is to say, the deposit cannot be oxidated and acted on by reagents as arsenious acid is.

Tests for arsenious acid when mixed with organic liquids? They are the same, viz. Christison's test, Marsh's test, and Reinsch's test. But before applying these tests, we are recommended to boil the matter with a large quantity of water and some hydrochloric acid to separate organic matters, next to filter the liquid and then to apply any of the tests; I think the first and the last are best.

Answer to 5th Question.

1*st Tests for Lead.*—Take acetate *the most poisonous.*

Acetate of Lead.

Solid.—1. When crystals of it are heated in a tube it melts and then becomes charred, 2. When heated with sulphuric acid, it gives off vapour of acetic acid and may be recognised by its odour, 3. When crystals are dropped in a solution of iodide of potassium it strikes a yellow precipitate 4. When thrown into hydro sulphuret of ammonia, it becomes quite black, 5. When dropped in diluted sulphuric acid, it gives a white sulphate of lead, giving off acetic acid at the same time.

Liquid.—1. Sulphuretted hydrogen gives a dark black precipitate. 2 hydro sulphuret of ammonia gives the same. 3 iodide of potassium gives a fine canary yellow precipitate of iodide of lead. 4 sulphuric acid causes a white. 5 galvanic test, if its solution (slightly acidulated with muriatic acid) be placed upon a platina capsule, and if the capsule be touched through the solution by a zinc rod, lead is immediately deposited. 6 deposition of lead by zinc only, if you introduce a piece of zinc in a solution acitate of lead slightly acidulated, lead is deposited in beautiful crystals, giving a tree like appearance to zinc.

Detection of lead in organic liquids. In such cases lead generally remains dissolved in solution, therefore we are told to filter the liquid and apply a trial test; dip a piece of paper in it and expose it to a current of sulphuretted hydrogen, if this gives evideuce of the presence of lead by its very dark colour then pass sulphuretted hydrogen, until no further precipitate falls, filter the liquid and collect to dry the sulphuret; dissolve it in nitric acid or sulphuric acid and then apply the tests proper to lead.

Carbonate of lead.—The tests for detecting lead are the same but a carbonate is known by effervescence taking place when stronger acid is added to it, or carbonic acid may be precipitated by lime, as chalk or carbonate.

Tests for Copper.—Sulphate of Copper.

Liquid Tests.—1 Ammonia gives a bluish white precipitate which becomes dissolved by the excess of the re-agent forming a beautiful blue solution of ammoniaco sulphate of copper. 2 Ferrocyanide of potassium gives a chestnut brown precipitate or of a claret red colour, 3 sulphuretted hydrogen or hydro sulphuret of ammonia gives a chocolate brown coloured precipitate, all of these tests are characteristic tests for copper. 4 reduction test; copper may be reduced to its metallic form by iron plates, but the solution should be acidulated by an acid previous to the introduction of iron, the plates (if copper present) become red resembling copper, there is only one metal which is red also but it is too rare and besides it is precipated black by hydro sulphuret of ammonia. Orfila recommends to reduce copper by phosphorus, instead of iron ; when phosphorus becomes coated by copper it may be washed in nitric acid, and then the resulting solution may tested by the proper tests already told.

Copper in organic liquids may be tested in the same way, except we require to filter the liquid. In such cases it may be reduced. 1 as *sulphuret of copper* by sulphuretted hydrogen. 2 or in metallic state either by phosphorus or iron; the metal or the sulphuret thus obtained should be dissolved in nitric acid and then tested.

I have no time now; my time is nearly over so I cannot enter on the details of each process.

Nitrate and acetate of copper may be tested in the same way for copper, but nitric acid may be detected by its proper tests.* There is no chemical test for acetic acid, but it may be known by its smell, when acetate is acted on by a stronger acid.

Tests for Antimony.

Tartar Emetic.

Solid.—1. It requires 14 parts of cold and 2 parts of boiling water to dissolve it.—2. It becomes charred when heated, but does not melt like acetate of lead.—3. When a few crystals of it are thrown in a solution of hydrosulphuret of ammonia it is immediately changed, and throws down nearly a wine coloured precipitate. 4 Ferrocyanide of potassium has no action on it.

Liquid.—1. When to a solution of tartar emetic hydrosulphuret of ammonia or sulphuretted hydrogen water is added it changes it to a brown red precipitate 2. Ferrocynadide of potassium has no action on it. 3. nitric acid precipitates it as subnitrate of antimony. 4 In the same way the other two mineral acids, viz. sulphuric and hydrochloric acid, pre-

* Nitric acid is best known by separating copper first a sulphuret, then neutralising the acid by potash, which forms nitrate of potash; if evaporated it crystalises, nitrate of potash may be known by following properties. 1. It crystallises its fluted prisms, neither deliquescent nor effervescent. 2. It deflagrates with charcoal, chlorates also deflagrate. 3. If heated with sulphuric acid it gives colourless acid fumes, which character distinguishes nitrates from other deflagrating salts. 4. If heated with sulphuric acid and copper filings, then the mixture evolves nitrous acid gas which may be easily known by its colour and odour.

cipitate it. 5. Infusion of galls gives a brown dirty precipitate also. 6. It may be tested by Marsh's test; that is to disengaging antimoniuretted hydrogen.

Afternoon Paper.

Answer. 1. *Treatment of narcotic poisoning in general.*—The first thing which we have to do is to remove the poison from the stomach if possible; the best means for fulfulling this indication is the stomach-pump: it should be applied as early as possible: after having removed the contents of the stomach, we are recommended to inject water into the organ, in order to wash out the viscus well, and then again to remove the liquid thus injected. This operation should be repeated as many times as it may be required—this means, I should say cannot be applied in cases of hydrocyanic acid, for the reason, hereafter mentioned: emetics are recommended too, but they are of little use should the patient be in a state of coma. Next indication is to apply a diffusible stimulant (ammonia) to the nostrils, if the patient be much exhausted or be in a state of collapse.

Cold affusion is another good method of rousing the patient, for which purpose a stream of cold water may be poured down from a height of six or eight feet, upon the head chest and spine,—Dr. Christison recommends even to inject cold water in the ears.

Great thing we are recommended to do is to keep the patient awaked and prevent him from sleeping; for this purpose the patient should be made to walk between two persons up and down. Electricity is another means to rouse the patient—it should be recoursed to, if other means fail. There are a few cases mentioned in Taylor's Toxicology, where every other means failed but electricity was applied with success.

Treatment of poisoning by Opium.—In this case as well as in other narcotic poisonings we should remove the poison from the stomach by the stomach-pump—and inject more water in the same way as above told and remove it again—this may be repeated until the water drawn from the stomach has neither the odour nor the colour of opium. The existence of opium may be best ascertained by a persalt of iron, which will give a red colour should there be any quantity of the poison in question—Emetics may also be given should the patient be sensible and its effects promoted by large drinks, &c. but it should be noted that emetics are far inferior to the stomach-pump, for they generally in such cases do not act even in large doses. But in applying stomach-pump we should recollect to change the position of the tube within the stomach, should we meet any obstacle, for if not, then we should I think injure the stomach, causing the extravasation of blood and tinging the water red. Should the patient be not recovered cold affusion should be recoursed to and electricity also.

Ammonia to the nostrils,—and even it may be given in small doses in diluted state mixed with ether, should the patient be capable of swallowing anything, if not, then it should be withheld.

We should keep the patient awaked by keeping him in constant motion.

Treatmeut of Poisoning by hydrocyanic acid.—This acid proves so very rapidly fatal that in most cases, we can do little or nothing. If we see the case early enough we should recourse to cold affusion on the

spine and back part of [the head,—ammonia to the nostrils. If there be any means of introducing anything in the stomach, then in such cases we should adminster a little chlorine water, or sulphuretted hydrogen-water as antidotes, for the former decomposes it and forms hydro-chloric acid and cyanogen, and the latter forms sulphuretted hydrogen and cyanogen. But after the description I gave, I should say that these things are never at hand and so we cannot use them—then therefore our chief remedies must be cold affusion to the spine, and ammonia to the nostrils. Electricity, if possible to obtain it at that time, may be used with good effect.

Should the poisonous symptoms be induced by inhaling vapour of hydrocyanic acid, ammonia is the best antidote I should say, accompanied with cold affusion.

Answer 2nd.—Distinction between between poisoning by opium and appoplexy—

1. Appoplexy generally comes on by previous warnings such as headach, giddiness, drowsiness, partial and temporary palsy, &c., of some time standing, but in cases of poisoning by opium it cannot be the case—therefore the previous history may tell us to some extent.

2. *Age*—Appoplexy seldom or never occurs below thirty years of age, cases of poisoning by opium may occur at any age.

3. According to old writers, Christison says, that appoplexy attacks fat persons, and persons of peculiar make, the "appoplextic make," that is persons with large head, short neck, of small stature, and with plethoric condition of the general circulatory system.

4. With regard to the relation of last taken food or drink; if appoplexy is induced by a hearty meal, then it generally comes on immediately after the meal, or even during the meal, but the symptoms induced by opium seldom appear earlier than half an hour.

5. Coma in appoplexy is the first symptom and is abrupt in its commencement, while coma in opium is always slow, and preceeded by giddiness, drowsiness &c.

6. Death in cases of appoplexy is seldom earlier than 24 hours and even some days, but in cases of opium should it prove fatal, it should be between 6 and 12 hours.

7. Face is generally bloated and flushed in appoplexy, but usually pale and ghastly in cases of poisoning by opium.

8. Pupils are dilated in appoplexy, but generally contracted in opium.

9. Patient can be roused easily in the first stage of poisoning by opium, and even though with difficulty in the later stage, but a person cannot be roused and rendered answerable, while labouring under an attack of appoplexy.

10. Post mortem appearances, may lead us to some extent to know the true nature of the case. In simple appoplexy or the nervous appoplexy of Dr. Abercrombie, there is nothing left in the dead body; in such cases it is very difficult to make out which is which. Same may be said with regard to the congestive, and serous appoplexy. In one case you will find the blood vessels in the cranium highly gorged with blood, and in the other effusion and accumulation of serum in different parts of brain, either on the surface of the brain or in the ventricles, &c.

But in appoplexy caused by extravasation of blood you will find clots of blood on the surface of the brain, &c.—this will generally decide on the existence of appoplexy, but not so in all cases.

Dr. Christison mentions one or two cases of poisoning by opium, in which extravasation of blood was also found, but this is very rare.

12. In cases of opium when you will open the stomach there will generally be a perceptible smell of the drug, particularly if we examine it early, sometimes you will find crude opium sticking here and there in the stomach. Should it be truly a case of poisoning by opium, chymical analysis (which I dont think the question demands to describe) for detecting morphia and meconic acid will at once decide on the nature of the case.

Distinction between poisoning by opium and intoxication by alcohol.

1*st.*—In the first place in a case of intoxication by alcohol there is a perceptible smell of alcohol; and it is indeed a great characteristic of intoxication. In cases of poisoning by opium there may or may not be a perceptible smell of the drug.

2*nd.*—Face is flushed and red in cases of intoxication, but pale and ghastly in opium cases.

3*rd.*—Pupil generally dilated in cases of alcohol, but contracted in those of opium, but retina insensible in both cases.

4*th.*—History of the case,—should we be able to make it out by any means will also tell us to decide about the case.

Answer to the 3rd Question.—The effects of carbonic acid on the system when slowly generated and largely diluted with the atmospheric air are as follows.

Giddiness, slowly coming on; weight in the head; headach; drowsiness;—loss of muscular power is a very remarkable effect, though the individual feels uneasy &c., yet he scarcely desires to get out of the room.

After all the patient gradually becomes narcotised, should the patient be not brought out and taken in a purer atmosphere he is very apt to die in such a condition, asphyxiated and narcotised. Blood in the whole system becomes dark, containing much carbon, circulating both in arterial and venous system, skin becomes livid and occasionally swollen.

Effects of pure carbonic acid when a person is suddenly immersed in it. The individual becomes immediately asphyxiated and falls down half dead, muscular motions are at once destroyed, eyes become protruded and red.

MAHOMED JAUN.

Appendix No. E.

Anatomy and Physiology.

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Amin Udin,
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