The Tamil Nadu
Dr. M.G.R. Medical University
Madras

Regulations For The
M. B. B. S. Course

The Tamil Nadu
Dr. M. G. R. Medical University

MADRAS

Regulations of the University

In exercise of the powers conferred by Section 44 of the Tamil Nadu Dr. M. G. R. Medical University, Madras, Act, 1987 (Tamil Nadu Act 37 of 1987), the Standing Academic Board of the Tamil Nadu M. G. R. Medical University hereby makes the following regulations :

SHORT TITLE AND COMMENCEMENT :

These regulations shall be called "THE REGULATIONS FOR THE M.B.B.S., COURSE OF THE TAMIL NADU DR. M. G. R. MEDICAL UNIVERSITY, MADRAS".

They shall come into force from 9th November, 1992.

The regulations framed are subject to modification made by the Standing Academic Board from time to time.

FIRST M.B.B.S.

1. ELIGIBILITY

Qualification for admission

A. Candidates belonging to all categories except Sheduled Castes, Sheduled Tribes for admission to the medical course must have obtained not less than 50% of the total marks in English, Physics, Chemistry and Biology (Botany/Zoology) **taken together** (aggregate) at the qualifying examination after a period of 12 years study.

B. Candidates belonging to Scheduled Castes / Scheduled Tribes, the minimum marks for admission shall be 40% in lieu of 50% for General Category.

Graduate Candidates

To have qualified for the B.Sc, Degree of an Indian University recognised by the Association of Indian Universities and accepted as equivalent by the Standing Academic Board and Governing Council of this University subject to such conditions as may be prescribed therefor with one of the following subjects as major subject viz. Physics, Chemistry, Botany, Zoology and one other prescribed Science subject of study at least upto the ancillary level ; provided that such candidates shall have passed the earlier qualifying examination (Higher Secondary Examination or an equivalent Examination) with the subjects English, Physics, Chemistry, Biology Botany and Zoology.

Other Criteria

Where the course content is not as prescribed for 10+2 education structure of the National Committee, the candidates will have to undergo a period of one year pre-professional/pre-medical training before admission to the medical colleges.

a) The pre-professional / pre-medical examination with Physics, Chemistry and Biology, after passing either the Higher

Secondary School examination, or the pre-university or an equivalent examination shall include a practical test in these subjects.

b) The pre-university course which was in vogue prior to the advent of the Higher Secondary examination shall not be treated as equivalent to the Higher Secondary examination (10+2) for purpose of eligibiiity and admission to the course.

c) Wherever the State Board/Body or appropriate authority have taken into account only the Plus Two level marks to determine the class of the candidate and issue the statement of marks accordingly, it alone would be taken into consideration.

d) Wherever the State Board/Body or appropriate authority have taken into account the marks obtained at the Plus One and Plus Two levels to determine the class of the candidate and furnish the statement of marks accordingly the aggregate of the two examinations shall be taken into consideration.

e) Candidates who have studied abroad the equivalency of qualification as determined by the Association of Indian Universities will form the guidelines to determine the eligibility and must have passed in the subjects of Physics, Chemistry, Biology (Botany/Zoology) and English upto the 12th Standard level with 50% marks aggregate.

f) Any criteria not covered under the above provisions, the ruling of the Eligibility Committee shall be adopted

National Open School qualification

Candidates who have passed the Senior Secondary School examination of National Open School with minimum 5 subjects with any of the following group of subjects :

(a) English, Physics, Chemistry, Botany, Zoology.

(b) English, Physics, Chemistry, Biology, and any other language.

(To be read along with 'Qualification for Admission' A and B)

2. AGE LIMIT FOR ADMISSION

a) Should have completed the age of 17 years at the time of admission or would complete the age on or before 31st December of the year of admission to the first year M.B.B.S. Course.

3. COMMENCEMENT OF THE COURSE

1st July of an Academic Year

4. SUBJECTS OF STUDY

1. General lectures for fresh students
2. Behavioural Sciences
3. Biostatistics
4. Biophysics
5. No University Examination shall be conducted for the above four subjects.

I M.B.B.S. PART - I SUBJECTS

1. Anatomy - I
2. Physiology - I
3. Biochemistry

I M.B.B.S. PART - II SUBJECTS

1. Anatomy - II
2. Physiology II

5. ACADEMIC TERMS

First M.B.B.S.

Part-I : 1st July to 31st March

Part-II : 1st June to 31st October

6. CUT - OFF DATES

The candidates admitted from 1st July to 30th September will be registered to take up their I year examination in April of the next year.

The candidates admitted from 1st October to 31st December will be registered to take up their I year examination during the October of the next year.

The candidate admitted on or after 1st January will be registered to the academic year concerned but they have to undergo the course and appear for the examination along with the subsequent year batch of students.

7. EXAMINATION DATES

April 1st

November 1st

If the date of commencement of the examination falls on Saturdays, Sundays or declared Public Holidays, the examination shall begin on the next working day.

8. IMPROVEMENT OF MARKS IN THE HIGHER SECONDARY EXAMINATIONS

Candidates who have secured the stipulated minimum academic requirements in two opportunities for improvement within one year from the date of first appearance in the qualifying examination are eligible for I M.B.B.S, Degree course.

9. RE-APPEARANCE OF FAILED CANDIDATES

Candidates who have passed the failed subjects in the qualifying examination in two opportunities within a period of one year or the first appearance are eligible for admission to the First M.B.B.S. course.

10. ELIGIBILITY CERTIFICATE

Candidates who have passed any qualifying examination other than the Higher Secondary course examination conducted by the Government of Tamil Nadu shall obtain an eligibility certificate from the University by remitting the prescribed fees along with the application form before seeking admission to any one of the affiliated Medical Institutions.

11. REGISTRATION

A candidate admitted to the course in any of the affiliated colleges shall register with this University by remitting the prescribed fees along with the application form for registration duly filled in and forwarded to this University through the Head of the Institution within the stipulated date.

12. DURATION OF THE COURSE

The period of certified study for the course of Degree of Bachelor of Medicine and Surgery shall extend over a period of 4½ academic years and one year of compulsory Rotatory Resident Internship before the award of the Degree.

13. CURRICULUM

The curriculum and the syllabi for the course shall be as prescribed from time to time.

14. WORKING DAYS IN AN ACADEMIC YEAR

Each academic year shall consists of not less than 200 working days.

15. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATION

a) No candidate shall be permitted to any one of the parts of M.B.B.S. Examinations unless he has attended the course in the subject for -the prescribed period in an affilised institution

recognised by this University and produces the necessary certificate of study, attendance and progress from the Head of the Institution.

b) A candidate is required to put in minimum 80% of attendance in both theory and practical / clinical separately in each subject before admission to the examination.

c) A candidate lacking in the prescribed attendance and progress in any one subject in theory and practical / clinical in the first appearance shall not be permitted for admission to the entire examinations.

16. REGULATIONS FOR CONDONATION OF LAKE OF ATTENDANCE

Condonation of shortage of attendance upto a maximum of 10% in the prescribed minimum attendance for admission to an examination vests with the discretionary powers of the Vice-Chancellor. A candidate lacking in attendance should submit an application in the prescribed form and remit the stipulated fee 15 days prior to the commencement of the theory examination. The Head of the Department and Head of the Institution should satisfy themselves on the reasonableness of the candidates request while forwarding the application with their endorsement to the Controller of Examinations who would obtain the Vice-Chancellor's approval for admission to the examination. No application would be reviewed if it is not forwarded through proper channel.

Condonation for lack of attendance should be taken up for consideration under the following circumstances :

(a) Any illness afflicting the candidate. (The candidate should submit to the Head of the Institution a Medical Certificate from a registered Medical Practitioner soon after he returns to the Institution after treatment.)

(b) Any unforeseen tragedy in the family. (The parent / guardian should give in writing the reason for the ward's absence to the Head of the Institution.)

(c) Participation in NCC / NSS and other co-curricular activities representing the Institution or University. (The Head of the Institution should instruct the concerned officers in-charge of the student activities in their institution to endorse the leave.)

(d) Any other leave the Head of the Institution deems reasonable for condonation.

17. RE-ADMISSION AFTER BREAK OF STUDY

a) Candidates having a break of study of 5 years and above from the date of admission and more than two spells of break will not be considered for re-admission.

b) The five years period of break of study shall be calculated from the date of first admission of the candidate to the course for the subsequent spells of break of studies.

c) Candidates having break of study shall be considered for re-admission provided that they are not subjected to any disciplinary action and no charges are pendiag or contemplated against them.

d) All re-admission of candidates are subject to the approval of the Vice-Chancellor.

e) The candidates having a break of study below 6 months shall apply for re-admission in the prescribed form and afrer remitting the stipulated fee for condonation to the Academic Officer of this University. The candidates may be re-admitted in the corresponding course of study at the commencement of the session and shall undergo a minimum period of study of 3 months and after fulfilment of the regulations of this Univesity be admitted for the examination. The candidates shall be granted exemption in the subjects they have already passed.

f) The candidates having a break of study of 6 months and above but less than one year shall apply for re-admission in the prescribed from and after remitting the stipulated fee for

condonation to the Academic Officer of this University. The candidates may be re-admitted in corresponding course of study at the commencement of the session and shall undergo a minimum period of study of 3 months and after fulfilment of the regulations of this University be admitted for the examination. The candidate shall be granted exemption in the subjects they have already passed.

g) The candidates having a break of study of one year and above but less than three years shall apply for re-admission in the prescribed form and after remitting the stipulated fee for condonation to the Academic Officer of this Univesity.

The candidate may be re-admitted in the corresponding course of study at the commencement of the session and shall undergo a minimum period of study of 6 months and after fulfilment of the regulations of this University be admitted for the examination. The candidate shall be granted exemption only in the pre-clinical subjects they have already passed.

h) The candidate having a break of study of 3 years but less than 5 years shall apply for re-admission in the prescribed form and after remitting the stipulated fee for condonation to the Academic Officer of this University.

The candidates may be permitted to re-join the course at the beginning of the pre-clinical (Phase-I/Clinical Phase-II) course, as the case may be, with the condition that these candidates will have to undergo the prescribed period of study in the pre-clinical or clinical course permitted by the University on re-admission and will not be granted any exemption in any subject they have already passed. They shall subscribe to the regulations of this University.

18. MIGRATION / TRANSFER OF CANDIDATES

a) Migration / Transfer of candidates from one recognised Medical College to another recognised Medical College of this University or from another University shall be granted as per the following regulations :

i) A student studying in a recognised medical college may be allowed to migrate/transfer to another recognised Medical College under another / same University.

ii) The migration / transfer can be allowed by the University concerned within three months after passing the 1st professional examination, as a rule.

iii) Migration / transfer of students during the course of their training for the clinical subjects should be avoided.

(iv) The number of students migrating / transferring from one medical college to another medical college during one year will be kept to the minimum so that the trainins of the regular students of that college is not adversely affected. The number of students migrating / transferring to / from any one medical college should not exceed the limit of 5% of its intake in any one medical college in one year.

(v) Cases not covered under the above regulations are to be referred to the Medical Council of India for consideration on individual merits.

(vi) An intimation about the admission of migrated / transferred students into any medical college should be sent to the Medical Council of India forthwith.

b) The provision of combination of attendance shall be granted to a transferee for admission to the examinations of this University on satisfactory fulfilment of the regulations of this University.

c) All migrations / transfers are subject to the approval of the Vice-Chancellor.

19. SUBMISSION OF LABORATORY RECORD NOTE BOOKS

At the time of practical / clinical examination each candidate shall submit to the Examiners his / her laboratory note books duly certified by the Head of the Department as a bonafide record of the work done by the candidate.

The practical record shall be evaluatedby the concerned Head of the Department (Internal Evaluation) and the practical record marks shall be submitted to the University 15 days prior to the commencement of the theory examinations.

The candidate may be permitted by the examiners to refer to the practical record book during the practical examination in the subject of Biochemistry only. No other materials, handwritten, cyclostyled or printed guides is allowed for reference during the practical examinations.

In respect of failed candidates the marks awarded for records at previous examinations will be carried over for the subsequent examination or the candidates shall have the option to improve his performance by submission of fresh records.

20. INTERNAL ASSESSMENT

A minimum of four written examinations shall be conducted in each subject during an academic year and the average marks of three best performances shall be taken into consideration for the award of sessional marks.

A minimum of three practical examinations shall be conducted in each subject during an academic year and an average of two best performances shall be taken into consideration for award of sessional marks.

A failed candidate in any subject should be provided an opportunity to improve his sessional marks by conducting a minimum of two examinations in theory and practical separately and the average may be considered for improvement.

The internal assessment marks (both in written and practicals taken together) should be submitted to the University endorsed by the Head of the Institutions 15 daye prior to the commencements of the theory examinations.

21. CONDITION FOR APPEARING FOR PART—I AND PART—II TOGETHER

Candidates certified to appear for Part-I examination by the Head of the Institution do not appear for the examination although qualified to do so shall alone have the option to appear for Part-I and II Examinations together at the end of the course. No candidate shall be permitted to appear for parts I and II examinations together under any other circumstances.

22. CLASSIFICATION OF SUCCESSFUL CANDIDATES

A. successful candidate who secures 60% or above of the marks in the aggregate in his/her first appearance will be declared to have passed in the first class in that particular subject and a successful candidate securing 75% or above of the marks in the aggregate in any subject in the first appearance will be declared to have passed the examination in the subjects with distinction.

B. First class may be awardad to such candidates who have passed all the subjects at the first appearance and obtained 60% of marks and above in all the subjects he/she had appeared.

C. Candidates who have passed all the subjects at the first appearance and obtained 75% of marks and above in all the subjects he/she had appeared shall be awarded first class with distinction.

D. All other succeesful candidates shall be declared to have passed in second class.

23. EXEMPTION FROM RE-EXAMINATION IN A SUBJECT

Candidates who failed in the examination but obtain pass mark in any subject shall be exempted from re-examination in that subject.

24. CARRY-OVER OF FAILED SUBJECTS IN I M.B.B.S. PART—I

A. Candidates who fail in the I M.B.B.S.—Part-I subject(s) are permitted to take the examination in the failed subject(s) along with the Part-II examination without any further period of study.

B. Candidates who fail in any subject(s) in I M.B.B.S. Part I and II shall be required to undergo a further period of study in the failed subject(s) extending to the next succeeding examination. The Head of the Institution shall be required to satisfy that the candidate had secured 80% attendance during the extended period of study before admission to the examinations.

25. PROMOTION TO II M.B.B.S. COURSE

Candidates who have passed all the subjects in the I M.B.B.S. Part I and Part II Examinations alone shall be promoted to II M.B.B.S. Course.

DISTRIBUTION OF MARKS

Paper	UE Marks			IA Marks		Total
	W	O	P	IA	R	
PART—I						
Anatomy-I	100	20	40	30	10	200
Physiology-I	100	20	40	30	10	200
Biochemistry	100	20	40	30	10	200
PART - II						
Anatomy-II	100	20	40	30	10	200
Physiology-II	100	20	40	30	10	200

UE Marks—University Examination Marks

W: Written O: Orals P: Practicals

IA: Internal Assessment / Terminal Assessment / Day to Day Evaluation

R: Record Marks

MARKS QUALIFYING FOR A PASS

45% of marks in the University written examination	45/100
45% of marks in the University practical examination	18/40
50% of marks in the aggregate of written, practical, oral and internal assessment	100/200

SECOND M.B.B.S.

I. SUBJECTS OF STUDY

a) Course of Study :

Candidates during II MBBS Course shall undergo a period of study of 18 months duration.

b) II MBBS Course shall comprise of two parts - part - I and part - II.

c) Commencement of the Course :

The II MBBS Course shall commence from January 2nd (Regular) and June 1st of the academic year (Supplementary).

d) Subjects of Study :

1. Health Economic - 10 lectures to be given by Department of Community Medicine.

2. Research Methodology - a series of 4 to 6 introductory lectures in Research Methodology to be imparted to the I clinical year students.

3. No university examination shall be conducted for the above two subjects.

II MBBS - Part-I Subjects

1. Pharmacology
2. Pathology-I
3. Microbiology-I

University examinations to be held at the end of 12 months.

II MBBS - Part-II Subjects

1. Pathology-II
2. Microbiology-II

The University examinations to be held at the end of 18 months.

II. BLOCK POSTINGS - COMMUNITY ORIENTATION PROGRAMME

a) During the II MBBS and Final MBBS Part-I period, the second and third Block Postings under the Community Orientation Programme shall be carried out as a separate 15 days programme or clubbed together as one month posting during any phase of the II MBBS Course or Final MBBS Part - I period.

b) The training programme is compulsory and is left to the choice of the institution either to conduct two 15 days training programme or one 30 days training programme.

c) The Block Postings should be conducted either in a rural setting or an urban slum area depending on the convenience of the institution.

d) At the end of the Block Posting, each candidate should submit a report to the Head of the Department of Community Medicine, who should evaluate the report and award 10 marks as internal assessment which is carried over to Final MBBS Part-I.

EXAMINATION DATES : December 1st / April 8th

III. DISTRIBUTION OF MARKS

Paper	Ue Marks			IA Marks		Total
	W	O	P	IA	R	
PART—I						
1. Pharmacology	100	20	40	30	10	200
2. Pathology	100	20	40	30	10	200
3. Microbiology-	100	20	40	30	10	200
PART—II						
1. Patholcgy-II	100	20	40	30	10	200
2. Microbiology-II	100	20	40	30	10	200

UE Marks- University Examination Marks

W : Written O : Orals P : Practicals

IA : Internal Assessment/Terminal Assessment/Day to day Evaluation.

R : Record Marks

IV. MARKS QUALIFYING FOR A PASS

45% of marks in the University written examination	45/100
50% of marks in the University practical examination	20/40
50% of marks in the aggregate of written, practical, oral and internal assessment	1001200

V. CARRY - OVER OF FAILED SUBJECTS

a) Candidates who have failed in II M.B.B.S. Part-I subject(s) are permitted to take the examination in the failed subject(s) along with Part-II examination without any further period of study.

b) Candidates shall be eligible to proceed to the Final year M.B.B.S. Course, who have failed in any one of the subjects of II M.B.B.S. Course Part-I and Part-II.

c) In case of candidates, who have failed in more than one subject in the II M.B.B.S. Course, a further period of study extending to the next examination is essential. The Head of the Institution shall be required to certify that the candidate has secured 80% attendance during the extended period of study before admission to the examination.

MODEL QUESTION PAPER

II M.B.B.S. DEGREE EXAMINATION

PART—I	PART—II
PHARMACOLOGY	PATHOLOGY-II
PATHOLOGY-I	MICROBIOLOGY-II
MCROBIOLOGY-II	

Time : Three Hours Maximum : 100 Marks

i) Separate answer books must be used for Sections A and B.

ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

iii) Answer ALL the questions

SECTION—A (30 Marks)

1. Essay question (15 Marks)

2. Essay question (15 Marks)

SECTION—B (40 Marks)

2. Write short notes on :

a)

b)

c)

d)

e)

f)

h) (4×5=20 Marks)

SECTION - C — MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Total number of questions : 30

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

FINAL M B.B.S.

1. ADMISSION TO FINAL M.B.B.S. COURSE

1.1 No candidate shall be eligible to proceed to the Final year M.B.B.S. Course unless he / she has passed the II MBBS examinations. However, the candidate who has failed in any one of the subjects of II MBBS course Part-I and Part-II shall be eligible to undergo the Final MBBS part-I course and permitted to appear for the failed subject in II MBBS along with the Final MBBS part-I examinations.

1.2 No candidate shall be eligible to appear for the Final M.B.B.S. Part-II examinations unless he/she has completely passed all the subjects of II M.B.B.S. examinations, and thereafter shall undergo a course of study and training for one year before appearing for the Final M.B.B.S. Part-II examinations.

2. COURSE OF STUDY

2.1 Candidate during Final M.B.B.S. course shall undergo a period of study of 18 months duration.

2.2 The Final M.B.B.S. Course shall comprise of two parts- Part I and Part II.

3. COMMENCEMENT OF THE COURSE

3.1 The Final M.B.B.S. Course shall commence from June 1st (Regular) and January 2nd (Supplementary) of the academic year.

4. SUBJECTS OF STUDY

Final M.B.B.S.—Part - I

1. Forensic Medicine
2. Community Medicine
3. Ophthalmology / Oto-Rhino Laryngology University Examinations to be held at the end of six months.

Final M.B.B.S.—Part - II

1. Medicine
2. Paediatric Medicine
3. Psychiatry
4. Surgery
5. Orthopaedic Surgery
6. Anaesthesiology
7. Obstetrics and Gynaecology

University Examinations to be held at the end of 18 months.

5. COMMENCEMENT OF EXAMINATIONS

December 8th / April 15th

If the date of commencement of the examination falls on Saturdays, Sundays or declared Public Holidays, the examination shall begin on the next working day.

Model Question Paper

FINAL M.B.B.S. DEGREE EXAMINATION

PART—I

FORENSIC MEDICINE

COMMUNITY MEDICINE

Time : Three Hours Maximum : 100 Marks

i) Separate answer books must be used for Sections A and B.

ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

iii) Answer ALL the questions.

SECTION—A (30 Marks)

1. Essay question (15 Marks)
2. Essay question (15 Marks)

SECTION—B (40 Marks)

Write short notes on :

a)

b)

c)

d)

e)

f)

g)

h) (8 × 5 = 40 Marks)

SECTION—C MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Total number of questions - 30

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.
Select.

Allocation of Marks (Community Medicine)

Theory	100 Marks
Practicals	30 Marks
Internal assessment	
Block Posting : I M.B.B.S.—10	
II M.B.B.S.—10	
Theory and practicals —20	
Record —10	
	50 Marks
Viva voce	20 Marks
Total	200 Marks

Marks qualifying for a pass

45% of marks in the University written examination	45/100
50% of marks in the University practical examination	15/30
50% of marks in the aggregate of written, practical, Oral and internal assessment	100/200

Allocation of Marks (Forensic Medicine)

Theory	100 Marks
Practicals	50 Marks
Internal assessment	
Theory & Practicals —20	
Record marks —10	
	30 Marks
Viva voce	20 Marks
Total	200 Marks

Marks qualifying for a pass

45% of marks in the University written examination	45/100
50% of marks in the University practical examination	25/50
50% of marks in the aggregate of written, practical, Oral and internal assessment	100/200

Model Question Paper

FINAL M.B.B.S. DEGREE EXAMINATION

PART—I

OPHTHALMOLOGY

E. N. T.

Time : Three Hours Maximum : 100 Marks

(1) Separate answer books must be used for Sections A and B.

(2) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

(3) Answer ALL the questions.

SECTION—A (Ophthalmology) (35 Marks)

1. Essay question (15 Marks)

2. Write short notes on :

a)

b)

c)

d) (4×5=20 Marks)

SECTION B (ENT) (35 Marks)

1. Essay question (15 Marks)

2. Write short notes on :

a)

b)

c)

d) (4×5=20 Marks)

SECTION C—MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Questions 1 to 15—Ophthalmology
16 to 30—ENT

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

Allocation of Marks

	Ophthalmology	ENT
Theory	50	50
Clinical	25	25
Oral	15	15
Internal assessment	10	10
	100	100

Marks qualifying for a pass

45% of marks in the University written examination	23/50
50% of marks in the University clinical examination	13/25
50% of marks in the aggregate of written, Clinical, Oral and internal assessment	50/100 in each of the subjects

Model Question Paper

FINAL M.B.B.S. DEGREE EXAMINATION, DECEMBER 1992

PART—II

MEDICINE

Paper I - Medicine including paediatric Medicine

Time : Three Hours Maximum : 100 Marks

i) Separate answer books must be used for Sections A and B.

ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page

iii) Answer ALL the questions

SECTION A—MEDICINE (35 Marks)

1. Essay question (15 Marks)

2. Write short notes on :

a)

b)

c)

d) (4×5=20 Marks)

SECTION—PAEDIATRIC MEDICINE (35 Marks)

1. Essay question (15 Marks)

2. Write short notes on :

a)

b)

c)

d) (4×5=20 Marks)

SECTION C—MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Questions 1 to 15—Medicine

16 to 30—Paediatric Medicine

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

Model Question

Medicine

Serum Uric Acid level is elevated in

1. Gout
2. Cirrhosis Liver
3. Thyrotoxicosis
4. Haemolytic Jaundice

Paediatric Medicine

The average blood pressure of a one year old child is

1. 60/30 mm of Hg.
2. 70/40 mm of Hg.
3. 90/60 mm of Hg.
4. 110/70 mm of Hg.

Model Question Paper

FINAL M.B.B.S. DEGREE EXAMINATION, DECEMBER 1992

Part-II

MEDICINE

Paper II-Medicine including Psychological Medicine

Time : Three hours Maximum : 100 Marks

(i) Separate answer books must be used for Sections A and B.

(ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

(iii) Answer All the questions.

SECTION—A (30 Marks)

1. Essay question (15 Marks)

2. Essay question (15 Marks)

SECTION—B (40 Marks)

2. Write short notes on :

(a)
(b)
(c)
(d)
(e)
(f)
(g)
(h) ($8 \times 5 = 40$ Marks)

Questions :

a, b, c, d, e, f } —Medicine

g, h —Psychological Medicine

SECTION—C MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Questions 1 to 20 — Medicine

21 to 30 — Psychological Medicine

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

Model question :

Psychological Medicine

personality disorders are always

1. Manifested during adolescence.
2. Worse in old age.
3. Seen intermittenly in adult life.
4. Associated with good occupational functioning.

FINAL MBBS—PART II EXAMINATION

SUBJECT : MEDICINE

Allocation of Marks

	Medicine	Paediatrics	Psychological Medicine	Total
Theory				
Paper I	50	50		100
Paper II	80	—	20	100
				200
Clinical				
Long Case (One)	60	—	—	60
Short Case (One)	30	30	—	60
Spotters (Two)	20	20	—	40
				160
Oral	40	20	—	60
Internal Assessment	40	20	—	60
Record	10	10	—	20
				140
				500

MARKS QUALIFYING FOR A PASS

45% of marks in the University written examination	90/200
50% of marks in Clinical Examination (Medicine and Paediatrics taken together)	80/160
50% of marks in the aggregate of written, clinical, oral and internal assessment	250/500

FINAL M.B.B.S.—PART - II

Guidelines for Clinical Examination

Subject : Medicine including Peadiatric Medicine

MEDICINE :

Long Case	- One	- One hour		60 Marks
Short Case	- One	- 15 Mts.		30 Marks
Spotters	- Two	- 15 Mts.		20 Marks
			Total	110 Marks

PAEDIATRIC MEDICINE :

Short Case	- One	- 15 Mts.	-	30 Marks
Spotters	- Two	- 15 Mts.	-	20 Marks
			Total	50 Marks

The candidate should obtain 50% of marks (80/160) in Clinical Examination (Medicine and Paediatrics taken together) to be declared to have passed in Medicine.

1. Clinical Examinations shall be conducted from 8-30 A.M. to 1-30 P.M.

2. Candidates shall report to the Registrar in the Examination Hall half an hour before the commencement of the Clinical Examinations.

3. Number of candidates to be examined per day not to exceed 24.

4. The candidates to be divided into 3 batches A, B and C and not exceeding 8 per batch.

5. The A, B, C batches to be regrouped into A_1, A_2, B_1, B_2, C_1 and C_2.

6. The divison of batches and sub-groups to be done by the Registrar in each Institution.

Conduct of Clinical Examinations :

STAGE—I
EXAMINATION

Set of Examiners	Medicine		Paediatrics	
	Long Case	Short Case/ Spotters	Short Case	Spotters
I (Medicine)	A_1	A2		
II (Medicine)	B_1	B2		
III (Paediatrics)	—	—	C_1	C_2

7. Candidates belonging to sub-group A_1 and A_2 shall be allotted long case and short case/spotters respectively in Medicine and shall be examined by Set I (Medicine) Examiners.

8. Candidates belonging to sub-groups B_1 and B_2 shall be alloted long case and short case spotters respectively in Medicine and shall be examined by Set II (Medicine) Examiners.

9. Candidates belonging to sub-groups C1 and C2 shall start with short case and spotters respectively in Paediatrics and shall be examined by Set III (Paediatrics) Examiners. All the candidates belonging to sub - groups C_1 and C_2 shall be examined both in short case and spotters in Paediatrics before they proceed for Medicine Examinations.

GUIDELINES FOR ORAL EXAMINATIONS

SUBJECT : MEDICINE INCLUDING PAEDIATRIC MEDICINE

1. The Oral Examination shall be conducted from 2-30 p.m. to 5-30 p.m.

2. The Candidates shall report to the Registrar (Medicine) in the Examination hall 15 minutes before the commencement of the Oral Examinations.

3. The candidates shall be divided into two batches 'A' and 'B' by the Registrar (Medicine).

4. The 'A' Batch will be examined by the two sets of Medicine Examiners (Set I and Set II Examiners) and on completion of the Oral Examination shall report to the Registrar (Paediatrics).

5. The "B" Batch would start with Paediatric Medicine Examination and on completion proceed for Medicine Examination.

Medicine		Paediatric Medicine
Marks : 20	Marks : 20	Marks : 20
Set I Examiners	Set II Examiners	Set III Examiners
Examination on : Slides, Specimens, X-Rays, Instruments	Examination on : Charts and Theory	Examination on : Slides, Specimens, X-Rays, Charts, Instruments & Theory
A		C

6. The Set I (Medicine) Examiners shall examine the candidates in Slides, Specimens, X-Rays, Charts, Instruments and award 20 marks.

7. The Set II (Medicine) Examiners shall examine the candidates on charts and all aspects of theory in Medicine and award 20 marks.

8. The Set III (Paediatrics) Examiners shall conduct an overall examination in Paediatric Medicine and award 20 Marks.

9. At the end of each day of examinations, the 3 sets of Examiners shall total the marks for Oral Examinations and submit it to the Chairman - Board of Examiners in their respective centres.

10. The Two sets of Medicine Examiners shall alternate after each day in oral examination. i.e. The I set of Medicine Examiners shall examine the candidates in Slides, Specimens, X-Rays, Charts, Instruments on **Day one** of the Oral Examination and on **Day two** of the Oral Examination shall examine the candidates in Theory. The cycle can be arranged by the Two sets of Medicine Examiners.)

11. The Registrars in Medicine and Paediatrics in consultation with the examiners shall co-ordinate the rotation of the candidate during the various phases of the oral examinations.

STAGE—II

EXAMINATION

Set of Examiners	Sub-Groups	
I (Medicine)	C_1 (L.C - Med)	C_2 (SC/Sp - Med)
II (Medicine)	A_2 (L.C - Med)	A_1 (SC/Sp - Med)
III (Paediatrics)	B_1 (SC - Paed)	B_2 (Sp - Paed)

L.C.—Long Case ; SC - Short Case ; SP - Spotters

Med—Medicine ; Paed - Paediatrics.

10. Sub-Group A_1 after being examined by Set I (Medicine) Examiners in Long Case shall be examined by Set II (Medicine) Examiners in Short Case / Spotters. Similarly Sub-Group A_2 after being examined by Set I (Medicine) Examiners in Short Case/Spotters shall be examined by Set II (Medicine) Examiners in Long Case.

11. This system of evaluation provides the 4 Examiners in Medicine to evaluate all the candidates either in Long Case or Short Case/Spotters.

12. It is mandatory that a candidate should not be examined by the same set of Examiners both in Long Case and Short Case/ Spotters in Medicine.

13. It is recommended that a candidate be made to examine different systems in Long Case and Short Case / Spotters while allotment of cases.

STAGE III
EXAMINATION

14. The Sub-groups A_1 and A_2 after being examined by Set II (Medicine) Examiners in short Case/Spotters and Long case respectively shall proceed to Set III (Paediatric) Examiners for examination in Short Case and spotters in paediatrics.

15. The A_1 and B_2 sub-groups after being examined by Set B_1 (Medicine) Examiners shall be examined in Paediatrics by Set III (Paediatric) Examiners after which they shall proceed to Set I (Medicine) Examiners to complete their Clinical Examinations in Medicine.

16. The sub-groups C_1 and C_2 after starting which Set III (Paediatric) Examiners shall be Examined by Set-I (Medicine) Examiners followed by Set-II (Medicine) Examiners to complete their Clinical Examination in Medicine.

17. The Registrars in Medicine and Paediatrics in consultation with the examiners shall co-ordinate the rotation of the candidate during the various phases of the clinical examinations.

Model Question Paper

FINAL M.B.B.S. DEGREE EXAMINATION, DECEMBER 1992

PART—II

SURGERY

Paper I—Surgery including Orthopaedic Surgery

Time : Three hours Maximum : 100 Marks

(i) Separate answer books must be used for Section A and B.

(ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

(iii) Answer ALL the questions

SECTION A—SURGERY (35 Marks)

1. Essay question (15 Marks)

2. Write short notes on :

(a)

(b)

(c)

(d) (4 × 5 = 20 Marks)

SECTION—B ORTHOPAEDIC SURGERY (35 Marks)

1. Essay question (15 Marks)

2. Write short notes on :

(a)

(b)

(c)

(d) (4 × 5 = 20)

SECTION C – MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Questions 1 to 15 — Surgery

16 to 30 — Orthopaedic Surgery

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

Model question :

Surgery

Ureteric colic

1. is acute pain radiating from loin to groin.
2. is associated with pyrexia.
3. is characterised by rigidity of Rectus abdominis.
4. always produces Haematuria.

Orthopaedic Surgery

Tennis elbow is

1. Medial Epicondylitis.
2. Olecranon Bursitis.
3. Supinator Myositis Ossificans.
4. Paid in the Lateral Epicondyl.

Model Quest on Paper

FINAL M.B.B.S. DEGREE EXAMINATION DECEMBER 1992

PART—I

SURGERY

Paper II—Surgery including Anaesthesia

Time : Three hours Maximum : 100 Marks

(i) Separate answer books must be used for sections A and B.

(ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

(iii) Answer ALL the questions

SECTION A—(30 Marks)

1. Essay question (15 Marks)
2. Essay question (15 Marks)

(Both questions in Surgery)

SECTION—B (40 Marks)

write short notes on :

(a)
(b)
(c)
(d)
(e)
(f)
(g)
(h)

Questions : (8 × 5 = 40 Marks)

a, b, c, d, e, f — Surgery

g, h — Anaesthesia

SECTION—C MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Questions 1 to 20 — Surgery

21 to 30 — Anaesthesia

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

Model question :

Anaesthesia

Surgical Anaesthesia induced with Ether is

1. rapid
2. accompanied by good muscle relaxation.
3. accompanied by increased myocardial excitability.
4. associated with high incidence of Hepatitis.

FINAL M.B.B.S. - PART II EXAMINATION

SUBJECT : SURGERY

Allocation of Marks

	Surgery	Orthopaedics	Anaesthesia	Total	
Theory :					
Paper-I	50	50	—	100	
Paper-II	80	...	20	100	
					— 200
Clinical :					
Long Case (One)	60	...	...	60	
Short Case (One)	30	80	...	60	
Spotters (Two)	20	20	...	40	
					— 160
Operative Surgery	20	...	...	20	
Oral	20	20	...	40	
Internal Assesment	40	20	...	60	
Record	10	10	...	20	
					— 140
					500

MARKS QUALIFYING FOR A PASS

45% of marks in the University written examinations	90/200
50% of marks in clinical examination (Surgery and Orthopaedics taken together)	80/160
50% of marks in the aggregate of written, clinical, operative surgery, oral and internal assessment.	250/500

3. Number of candidates to be examined per day not to exceed 24.
4. The candidates to be divided into 3 Batches A, B, and C and not exceeding 8 per Batch.
5. The A, B, C, Batches to be re-grouped into A_1, A_2, B_1, B_2, C_1. C_2.
6. The division of Batches and sub-groups to be done by the Registrar in each institution.

STAGE - I EXAMINATION

Conduct of Clinical Examination

Cet of Examination	Surgery		ORTHOPAEEICS	
	Long Case	Short Case / Spotters	Short Case	Spotters
I (SURGERY)	A_1	A_2		
II (SURGERY)	B_1	B_2		
III (ORTHOPAEDICS)	...	...	C_1	C_2

7. Candidates belonging to sub-group A1 and A2 shall be alloted Long Case and Short Case/Spotters respectively in Surgery and shall be examined by Set I (Surgery) Examiners.

8 Candidates belonging to sub-groups B1 and B2 shall be allotted Long Case and Short Case / Spotters respectively in Surgery and shall be examined by Set II (Surgery) Examiners.

FINAL M.B.B.S.—PART II

GUIDELINES FOR CLINICAL EXAMINATION

SUBJECT : SURGERY INCLUDING ORTHOPAEDIC SURGERY

SURGERY

Long Case	— One — One hour	— 60 Marks
Short Case	— One — 15 Mts.	— 30 Marks
Spotters	— two — 15 Mts.	— 20 Marks
	Total	110

ORTHOPAEDIC SURGERY

Short Case	— One — 15 Mts.	— 30 Marks
Spotters	— Two — 15 Mts.	— 20 Marks
		50 Marks

The candidate should obtain 50% of marks (80/160) in Clinical Examination (Surgery and Orthopaedics taken together) to be declared to have passed in Surgery.

1. Clinical Examinations shall be conducted from 8-30 a.m. to 1-30 p.m.

2. Candidates shall report to the Registrar in the Examination Hall half an hour before the Commencement of the Clinical Examination.

9. Candidates belonging to sub-groups C1 and C2 shall start with short Case and Spotters respectively in Orthopeadics and shall be examined by Set III (Orthopeadics) Examiners. All the candidates belonging to sub-groups C1 and C2 shall be examined both in Short Case and Spotters inOrthopaedics before they proceed for Surgery Examinations.

STAGE II—EXAMINATION

Set of Examiners	Sub-Groups	
I (Surgery)	C_1 (L.C. Surg)	C_2 (SC/Sp-Surg)
II (Surgery)	A_2 (L.C.-Surg)	A_1 (SC/Sp-Surg)
III (Orthopaedics)	B_1 (SC-Ortho)	B_2 (Sp-Ortho)

L.C. — Long Case ; SC — Short Case ; Sp — Spotters ; Surg — Surgery ; Ortho — Orthopaedics.

10. Sub-group A_1 after being examined by Set I (Surgery) Examiners in Long Case shall be examined by Set II (Surgery) Examiners in Short Case / Spotters. Similarly sub-group A2 after being examined by Set I (Surgery) Examiners in Short Case/Spotters shall be examined by Set II (Surgery) Examiners in Long Case.

11. This system of evaluation provides the 4 Examiners in Surgery to evaluate all the candidates other in Long Case or Short Case / Spotters.

12. It is mondatory that a candidate should not be examined by the same set of examiners both in Long Case and Short Case / Spotters in Surgery.

STAGE III—EXAMINATION

13. The sub-groups A_1 and A2 after being examined by Set II (Surgery) Examiners in Short Case / spotters and Long Case respectively shall proceed to Set III (Orthopaedic) Examiners for examination in Short Case and Spotters in Orthopaedics.

14. The B_1 and B_2 sub-groups after being examined by Set II (Surgery) Examiners shall be examined in Orthopaedics by Set III (Orthopaedic) Examiners after which they shall proceed to Set I (Surgery) Examiners to complete thair Clinical Examinations in Surgery.

15. The sub-groups C_1 and C_2 after starting with Set III (Orthopaedic) Examiners shall be examined by Set I (Surgery) Examiners followed by Set II (Surgery) Examiners to complete Clinical Examination in Surgery.

16. The Registrars in Surgery and Orthopaedic Surgery in Consultation with the Examiners shall co-ordinate the rotation of the candidates during the various phases of the Clinical Examinations.

GUIDELINES FOR ORAL EXAMINATION

SUBJECT : SURGERY INCLUDING ORTHOPAEDIC SURGERY

1. The Oral Examination shall be conducted from 2-30 p.m. to 5-30 p.m.

2. The candidates shall report to the Registrar (Surgery) in the Examination Hall 15 minutes before the commencement of the Oral Examinations.

3. The candidates shall be divided into three batches A, B, and C by the Registrar (Surgery).

4. The A and B Batches will be examined by the two sets of Surgery Examiners (Set I and Set II Examiners) and on completion of the Oral Examination shall report to the Registrar (Orthopaedics)

5. The C Batch would start with Orthopaedic Surgery Examination and on completion proceed for Medicine Examination.

SURGERY		ORTHOPAEDIC SURGERY
Marks : 20	Marks : 20	Marks : 20
Set I Examiners	Set II Examiners	Set III Examiners
Examination on : Slides, Specimens, X-Rays, and Theory	Examination on : Operative Surgery, Instruments	Examination on : Slides, Specimens, X-Rays, Instruments & Theory
A	B	C

6. The Set I (Surgery) Examiners shall examine the Candidates in Slides, Specimens, X-Rays and Theory and award 20 marks.

7. The Set II (Surgery) Examiners shall examine the candidates on all aspects of Operative Surgery and Instruments and award 20 marks.

8. The Set III (Orthopaedics) Examiners shall conduct an overall examination in Orthopaedic Surgery and award 20 marks.

9. At the end of each day of examinations, the 3 sets of examiners shall total the marks for Oral Examinations and submit it to the Chairman-Board of Examiners in their respective centres.

10. The two sets of Surgery Examiners shall alternate after each day in Oral examination. (i.e. The Set I of Surgery Examiners shall examine the candidates in Slides, Specimens, X-Rays and Theory and **Day one** of the Oral Examination and

on **Day two** of the Oral Examination shall Examine the candidates in Operative Surgery and Instruments. The cycle can be arranged by the Two sets of Surgery Examiners.)

11. The Registrars in Surgery and Orthopaedics in Consultation with the examiners shall co ordinate the rotation of the candidate during the Various phasese of the oral examinations.

Model Question Paper

FINAL M.B.B.S. DEGREE EXAMINATION, DECEMBER 1992

PART—II

OBSTETRICS AND GYNAECOLOGY

Time : Three Hours Maximum : 100 Marks

i) Separate answer books must be used for Sections A and B.

ii) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instructions on the first page.

iii) Answer ALL the questions

SECTION—A (30 Marks)

1. Essay question - Obstetrics (15 Marks)

2. Essay question - Gynaecology (15 Marks)

SECTION—B (40 Marks)

Write short notes on :

a)
b)
c)
d)
e)
f)
g)
h)

(8 × 5 = 40 Marks)

Questions :

a, b, c - Obstetrics
i, e, f - Gynaecology
g, h - Family welfare

SECTION—C MULTIPLE CHOICE QUESTIONS

Time : 20 Minutes Maximum : 30 Marks

Questions 1 to 15 — Obstetrics
16 to 30 — Gynaecology

Each question carries one mark.

No negative marking.

Each question contains four suggested responses of which only one is correct.

Select.

Model question :

Obstetrics :

In normal puberty, one of the following is characteristic.

1. The first menstrues cycle is anovulatory.
2. Pubic hair growth is the first sign.
3. Axillary hair growth occurs after the first menstrual period.
4. Cessation of growth.

Final M B.B.S. - Part II Examination

SUBJECT : OBSTETRICS AND GYNAECOLOGY

Allocation of Marks.

		Total
Theory		100
Clinical		
Obstetrics	— Long Case (One) ... 60 ()	120
Gynaecology	— Long Case (One) ... 60 ()	
Oral		40
Internal Assessment	... 30 ()	40
Record.	... 10 ()	
		300

Marks qualigying for a pass	
45% of marks in the University written examination	45/100
50% of marks in Clinical examination	60/120
50% of marks in the aggregate of written, Clinical, Oral and Internal Assessment.	150/300

Guidelines for Clinical Examination

SUBJECT : OBSTETRICS AND GYNAECOLOGY

Obstetrics — Long Case — One — One hour — 60 Marks

Gynaecology - Long Case — One — One hour — 60 Marks

Marks qualifying for a pass in Clinics

50% of Marks in Clinical Examination - 60/120

1. Clinical Examinations shall be conducted from 8-30 a.m. to 1-30 p.m
2. Candidates shall report to the Registrar in the Examination Hall half an hour before the commencement of the Clinical Examinations.

3. Number of Candidates to be examined per day not to exceed 24.
4. The Candidates to be divided into 2 batches A and B and not exceeding 12 per batch.
5. The division of batches to be done by the Registrar in each institution.

Conduct of Clinical Examination

Set of Examiners	Obstetrics Long Case Marks : 60	Gynaecology Long Case Marks : 60
I		
II		

7. Candidates belonging to Group A shall be examined in Long Case in Obstetrics by Set I Examiners first and on completion shall proceed to Set II Examiners for examination in Long Case in Gynaecology.
8. Candidates belonging to Group B shall be examined in Long Case in Gynaecology by Set II Examiners first and on completion shall proceed to Set I Examiners for examination in Long Case in Obstetrics.
9. This system of evaluation provides the 4 Examiners in Obstetrics and Gynaecology to evaluate all the candidates either in Obstetrics or Gynaecology.
10. It is recommended that the two sets of Obstetrics and Gynaecology Examiners alternate after each day in Clinical Examination. (i.e. The Set I Examiners shall examine the candidates in Obstetrics on **Day one** of the Clinical Examination and on **Day two** of the Clinical Examination shall examine the candidates in Gynaecology. The cycle can be arranged by the two sets of Obstetrics and Gynaecology examiner.)
11. The Registrar in consultation with the examiners shall co-ordinate the rotation of the candidates during the various phases of the Clinical Examinations.

Guidelines for Oral Examinations

SUBJECT : OBSTETRICS AND GYNAECOLOGY

1. The Oral Examination shall be conducted from 2-30 p.m. to 5-30 p.m.

2. The Candidates shall report to the Registrar (Obstetrics and Gynaecology) in the ExaminationHall 15 minutes befor the commencement of the Oral Examinations.

3. The Candidates shall be divided into two batches A and B by the Registrar (Obstetrics and Gynaecology).

	OBSTETRICS	GYNAECOLOGY
Set of Examiners	Dummy-Pelvis, X-Rays, Instruments, Theory.	Slides, Specimens, X-Rays, Instruments and Theory
	Marks : 20	Marks : 20
I		
II		

4. It is recommended that Set. I Examiners who examined all the candidates in Obstetrics in Clinical Examination in the forenoon session examine in oral all the candidates in Gynaecology in the afternoon session and vice versa.

5. This system of rotation provides the two sets of examiners to either examine Obstetrics or Gynaecology in Clinical / Oral Examinations each day.

6. The Set I Examiners shall examine the Candidates in Dummy-Pelvis, X-Rays, Instruments and Theory in Obstetrics and award 20 marks.

7. The Set II Examiners shall examine the candidates in Slides, Specimen, X-Rays, Instruments and Theory in Gynaecology and award 20 marks.

8. At the end of each day of examinations, the two sets of examiners shall total the marks for Oral Examinations and submit it to the Chairman-Board of Examiners in their respective centres.

9. The Registrars in Obstetrics and Gynaecology in consultation with the examiners shall co-ordinate the rotation of the candidates during the various phases of the oral examinations.

Compulsory Rotatory Resident Internship (C.R R.I)

AIMS

Internship is a phase of traineeship where in a graduate is expected to conduct actual practice of medical and health care and acquire skills under supervision so that he/she may become capable of functioning independently.

OBJECTIVES

A. To acquire practical experience in clinical management of the most common conditions encountered in practice and to learn first hand skills that are required for both diagnosis and treatment and decisions for referral. A detailed listing of the clinical skills / conditions is provided under each of the departmental heading.

B. The gain competence in dealing with the emergencies that may be medical, surgical, traumatic, obstetric or neonatal and to render first level contact care in rural and urban settings.

C. To acquire the knowledge of Essential Drugs concept and rational drug use. To be able to gain experience in infusion therapy, electrolytes, fluids, blood and its components or substitutes.

D. To participate in health programmes oriented to provide preventive health services to the community, to understand the management and direction of these programmes and to function effectively as a leader of the health team organised to deliver these services.

E. To provide supportive services to chronically sick. disabled and psychiatric cases and avenues for their rehabilitation.

C.R.R.I. POSTINGS

The C.R.R.I. Postings shall be arranged as given below :

Department of Medicine :

Medical Ward Postings	...	8 Weeks
Community Paediatrics	...	4 Weeks

The Community Pacdiatrics posting consists of involvement of the internees in School Health Programme. Universal Immunisation programme and IODS programme along with attendance in paediatrics ward also. The professor of Paediatrics should draw up the Duty Roster for the Internees posted for 4 weeks under Community paediatrics posting.

Department of Surgery

Surgical Ward Posting	—	8 Weeks
Orthopaedic Surgery Ward Posting	—	2 Weeks
Primary Surgical Care First Contact Service	—	4 Weeks This could be casualty department posting and trauma care postings.

Under Primary Surgical Care postings, the Internees should be posted to Casualty for 2 weeks, Trauma and Accident Ward for 2 weeks. Alternatively, one month posting to the nearest District Hospital or peripheral Hospital where surgeries are performed. The Head of the Institution should satisfy that accommodation and commutation facilities are available before posting internees to District Hospitals.

Obstetrics & Gynaecology Department

Obstetrics & Gynaecology Ward Posting — 6 Weeks

MCH and Family Planning — 6 Weeks

Under MCH and Family Planning postings, the Internees should be posted for 3 weeks in labour wards 1 week in Neonatology Ward and the remanining two weeks for training in Family Planning and involvement in camps.

Community Medicine Department

Primary Health Centre — 4 weeks (Compulsory)

The professor of Community Medicine shall arrange for posting of students under the following departments for 8 weeks with the concerned programme officer.

1. Department of Leprosy
2. Department of Tuberculosis
3. Infections Diseases Hospital
4. Department of STD
5. Legal Medicine (Postmortem-Forensic Medicine Department)
6. Posting under the District Malaria Officer
7. Posting under the District Filaria Officer
8. Community Medicine Department (Epidemiology, Population Dynamics, Vital Statistics, a short course in Hospital Management and exposure to the use of (Computers)

At the end of the Community Medicine Postings, the Internees should submit individual reports under the guidance of the staff of the field postings and the Community Medicine Department.

Elective Postings

The Internees may be provided an opportunity for two week training in any discipline of medicine of his choice which could be categorised as Elective Posting.

a) During the elective posting if the Internee wishes to do 2 weeks of Medicine or allied posting such as ICU, Dermatology, Radiology, Psychiatry, etc., it may be included in the Medicine postings.

b) Surgery and the allied postings such as Anaesthesia, ENT, Ophthalmology, etc., can be added to the Surgical posting.

c) If an Internee wishes to do 2 weeks of extended posting in Obstetrics and Gynaecology department, it can be added to the Obstetrics and Ganyacology postings while issuing the C. R. R. I. Certificate.

The Internee is permitted to avail a maximum number of 28 days leave during the one year C.R.R.I. posting and not exceeding one week leave during each posting.

ANNEXURE

DETAILS OF POSTING

Medicine	— 8 weeks
Community Paediatrics	— 4 weeks
Surgery	— 8 weeks
Orthopaedic Surgery	— 2 weeks
Primary Surgical Case (Casualty & Trauma Care)	— 4 weeks
Obstetrics & Gynaecology	— 6 weeks
MCH & Family Planning	— 6 weeks
Primary Health Centre	— 4 weeks

National Control Programmes :

1) Leprosy
2) Tuberculosis
3) Infectious Diseases — 8 weeks
4) S.T.D.
5) Filaria
6) Malaria
7) Legal Medicine
8) Community Medicine Department

Elective postings — 2 weeks

MODEL CRRI CERTIFICATE

Medicine — 8 weeks

Surgery including Orthopaedic Surgery — 10 weeks

Obstetrics & Gynaecology — 6 weeks

Community Medicine — 26 weeks

PRACTICAL SKILLS TO BE ACQUIRED BY THE INTERN STUDENT (CRRI)

GENERAL MEDICINE

Interns should acquire the following training during his/her term during the ward postings :

1. Bed side manners
2. Rapport with the patients

3. Acquire competence for clinical diagnosis based on history, physical examination and relevant laboratory investigations and institute appropriate line of management.

   This would include disease common in tropics (parasitic, bacterial or viral infection, nutritional disorder, including dehydration and electrolyte disturbances) and system illnesses.

4. Intern should have assisted as a care team in intensive care of cardiac, respiratory, hepatic, neurological and metabolic emergencies.
5. Injection techniques SC/IM IV/ID/Open method
6. Urinary catheterisation both male & female & condom application.
7. Temperature recording
   - oral
   - axilla
   - groin
   - rectal
8. Blood pressure
   - upper limb
   - lower limb
   - obese & thin individuals
   - adults & children

   — Application of tourniquet
9. Enema & suppository techniques
10. Ryics tube passing
11. Endotracheal tube Intubation
12. Handling of Oxygen Cylinders and giving Oxygen
13. Usage of Ambus bag
14. Suction application
15. Tepid sponging

16. Cardiac Resuscitation/Preecordial
    - External cardiac massage
    - Mouth to mouth breathing
    - Air way maintenance
    - Positioning of the patient
17. Use of mouth gag
18. Use of Crepe Elastic bandage
19. Use of Ophthalmoscope
20. Taking ECG and Interpretation
21. Stomach wash
22. Carotid Massage
23. Prostatic massage
24. Rectal Examination
25. Blood grouping, Rh Typing & Cross matching
26. Paracentesis abdomen
27. Pleural aspiration/biopsy
28. Under water seal/Decompression of Air in Pneumothorax
29. Dumbar puncture/Quichenstedts test
30. Sternal puncture/Iliac crest puncture
31. Arterial puncture
32. Venesection
33. Staining techniques
    - Gram stain
    - AFB
    - Leishman stain
34. Urine Examination
    - Albumin
    - Sugar
    - Ketone Bodies
35. Centrifuge usage in
    - Urine
    - CSF
    - Blood

36. Haemogram
    - RBC
    - TC
    - DC
    - ESR
    - Hb%
    - Bleeding time
    - Clothing time
    - Blood smear
37. Usage of Delirim sheet
38. Application of flatus tube
39. Giving enema
40. Examination of throat
41. Techniques of throat swab
42. Biopsy Procedures
43. Familiarity with usage of life saving procedures; including use of aspirator, respirator and defibrillator.
44. Competence in interpretation of different monitoring devices such as cardiac monitor, blood gas analysis, etc.
45. Participate as a team member in total health care of an individual including appropriate follow up and social rehabilitation.

The intern shall maintain a Log Book in which he/she shall record the skills acquired by him/her during his/her posting in the General Medicine Ward, which should be supervised by the assistants in Medicine and at the end of the Medical Ward Postings, the Log Book shall be certified by the Unit Chief that the intern has successfully completed the training programme before issue of the Completion Certificate.

Practical Skill to be Acquired by the Intern Student (C.R.R.I.)

Paediatric Medicine

The details of the skills that an intern should acquire during his / her tenure in the department of Paediatrics are as follows :

1. The interns should be able to diagnose and manage common childhood disorders including neonatal disorders and acute emergencies (enquiry from parents of sick children) examining a sick child and making a record of information.

2. The interns should be able to carry out activities related to patient care such as laboratory work, investigative procedures and use of special equipments.

3. **Techniques related to patient care :** Immunization, perfusion techniques, feeding procedures, tuberculin testing.

4. **Use of equipment :** Vital monitoring, temperature monitoring, resuscitation at birth, care of children receiving Intensive care.

5. Screening of newborn babies and those with objective risk factors for any anomalies steps for prevention in future.

6. Plan in collaboration with parents and individual, collective surveillance of growrh and development of newborn babies, infants and children so that he / she is able to :
   a) recognise growth abnormalities.
   b) recognise anomalies of psychomotor development.
   c) detect congenital abnormalities.

7. Assess nutritional and dietary status of infants and children and organise prevention, detection and follow up of deficiency disorders both at individual and community level such as :
   a) protein - energy malnutrition.

   b) deficiencies of vitamins especially, A, B, C and D.
   c) Iron deficiency.

8. Institute early management of common childhood disorders with special reference to paediatric dosage and oral rehydration therapy

9. Participate actively in public health programme oriented towards children in the community.

10. To start IV line (Butterfly Needle and Venfion)

11. IV line - Open method.

12. Cardio - Pulmonary Resuscitation.

13. Endotracheal intubation.

14. Dumbar puncture.

15. Ventricular puncture.

16. Venous, arterial Blood sample collection.

17. Bone marrow aspiration.

18. Intercostal drainage.

19. Catheterisations.

20. Assisted ventilation.

The intern shall maintain a Log Book in which he shall record the skills acquired by him during his posting in the paediatric Medicine and at the end of the Paediatric Ward Posting, the Log Book shall be certified by the Unit Chief that the intern has successfully completed the training programme before issue of the Completion Certificate.

Practical Skill to be Acquired by the Intern Student (C.R.R.I.)

General Surgery

Intern is expected to acquire the following skills during his / her posting :

1. Diagnose with reasonable accuracy all surgical illnesses including emergencies.
2. a. Resuscitate a critically injured patient, a servere burns patient.
   b. Control surface bleeding and manage open wound.
3. a. Monitor patients of head, spine, chest, abdominal and pelvic injury.
   b. Institute first line management of acute abdomen.
4. Dressing of wounds and ulcers.
5. I.M. and I.V. injections.
6. Starting and maintaining IV drips.
7. Cut down technique.
8. Passing Ryle's tube.
9. Urethral catheterisation using soft catheters including indwelling ones and their maintenance.
10. Application of POP slabs.
11. Ascitic and Pleural fluid tapping.
12. Water seal drain to the thorax.
13. Lumbar puncture.
14. Fine Needle aspiration Biopsy.
15. Core needle biopsy using the Trochar and Silverman needles. This would include liver biopsy.
16. Sternalmarrow puncture.

17. Airway maintenance & Endotracheal intubation by the oral route.
18. Maintaining a CVP (Central Venous Pressure) line.
19. Rectal examination and proctoscopy.
20. Care of the patient in coma from head injury.
21. Post-operative care after major surgery. (Intensive care of the post-operative patient)
22. Sterilisation of linen and instruments.
23. Preparation of operation theatre for surgery. (Cleaning, anti-tetanus procedures, etc.)
24. Surgical procedures :
    a) Instructions in the proper use of common surgical instruments and suture materials.
    b) Suture of wounds.
    c) Incision and drainage of abscesses.
    d) Basics of hand surgery : Care of hand wounds and hand infections.
    e) Excision of sebaceous cysts, dermoids, lipoma, corn foot, etc.
    f) Incision biopsy,
    g) Lymphnode biopsy.
    h) Circumcision
    i) Vasectomy
    j) Operation of hydrocele, haematocele and pyocele.
    k) Suprapubic drainage of bladder in retention of urine by using the trochar and indwelling suprapubic catheter
    l) Techniques of local anaesthesia.

25. Procedures which the interns should be acquainted with by watching a demonstration rather than by actual performance.

    a) Inserting a CVP line.

    b) Fibre optic upper GI endoscopy.

    c) Resusitation of cardiac arrest.

    d) Tracheostomy.

26. Observe and assist in laparotomy, appendicectomy and ingunial herinia repair.

The intern shall maintain a Log Book in which he shall record the skills acquired by him during his posting in the General Surgery and at the end of the Surgical Ward Posting, the Log Book shall be certified by the Unit Chief that the intern has successfully completed the training programme before issue of the Completion Certificate.

Practical Skill to be Acquired by the Intern Student (C R.R.I.)

Orthopaedic Surgery

Details of skills that an intern should acquire during his/her tenure in the department of Orthopaedics are as follows :

1. Diagnostic :

   Ability to diagnose and suspect presence of fracture, dislocation, acute osteomyelitis, acute poliomyelitis and common congenital deformities such as congenital talipes equinovares (CTEV) and dislocation of hip (CDH).

2. Therapeutic :

   Splinting (plaster slab) for the purpose of emergency splintage, definitive splintage and post operative splintage and application of Thomas splint.

3. Manual reduction of common fractures.

4. Manual reduction of common dislocations.

5. Plaster cast application for undisplaced fractures of arm, forearm, leg and ankle.

6. Emergency care of a multiple injury patient.

7. Precautions about transport and bed care of spinal cord injury patients.

   Skills that an intern should be able to perform under supervision :

8. Advice about prognosis of poliomyclitis, cerebral palsy, CTEV and CDH.

9. Advice about rehabilitation of amputees and multilating traumatic and leprosy detormities of hand.

   An intern most have observed or preferably assisted at the following operations :

10. Drainage for acute osteomyelitis.

11. Sequestrectomy in chronic osteomyelitis.

12. Application of external fixation.

13. Internal fixation of fractures of long bones.

The intern shall maintain a Log Book in which he shall record the skills acquired by him during his posting in the Orthopaedic Surgery and at the end of the Ortho. Surgical Ward Posting, the Log Book shall be certified by the Unit Chief that the intern has successfully completed the training programme before issue of the Completion Certificate.

Practical Skill to be Acquired by the intern Student (C R.R I,)

(Obstetrics & Gynaecology)

OBSTETRICS

1. Abdominal and Pelvic Examination.
2. Diagnosis of normal uterine pregnancy.
3. Diagnosis of abortion,
4. Diagnosis of Ectopic Pregnancy and Vesicular Mole.
5. Screening for high risk pregnancy.
6. Learning to know when to refer a patient to a Consultant.
7. Conduct of normal labour, how to give an episiotomy and suture the same.
8. How to evacuate the uterus inevitable and incomplete abortions.
9. How to monitor a pitocin drip.
10. Manual removal of placenta
11. Delivery by outlet forceps and vacuum extraction assisting major surgeries.
12. Postpartum hemorrhage and repair of perineal tears
13. Assist in forceps delivery.
14. Assist in caesarean section and postoperative care thereof.
15. Detection and management of abnormalities of lactation.
16. Perform non-stress test during pregnancy.

GYNAECOLOGY

17. Abdominal and Pelvic examination.
18. Speculum examination.
19. Learn to take cytological smears from the posterior fornix and cervix.
20. Learn to take cervical biopsy.
21. To perform the following procedures :
    a) Dilatation and curettage, fractional curettage.
    b) Endometerial biopsy.
    c) Endometerial aspiration.
    d) Pap smear collection.
    e) IUCD insertion.
    f) Minilap ligation.
    g) Urethral catheterisation.
    h) Suture removal in postoperative cases.
    i) Cervical punch biopsy.

FAMILY WELFARE

22. Introduction of IUCD.
23. How to deal with its complications.
24. How to remove an IUCD.
25. Learning about the contraceptive pill - Its indications and contra-indications.
26. Learn to do puerperal sterilisation under Local Anaesthesia.

The intern shall maintain a Log Book in which he shall record the skills acquired by him during his posting in Obstetrics and Gynaecology and at the end of the Obstetrics and Gynaecology Ward Posting, the Log Book shall be certified by the Unit Chief that the intern has successfully completed the train ng programme before issue of the Completion Certificate.

PROFORMA

Format for furnishing details of candidates in whose cases Condonation of shortage of attendance has been granted for appearing for THEORY EXAMINATIONS

Name of the College : .....

Academic Year for which Condonation has been granted for : .....

Sl. No.	Name of the Candidate (s)	Name of the Course and Branch	Total No of working days / hours for the year / Semester	Minimum No. of days required for attendance certificate (80%)	No. of days attended by the candidate	Actual shortage of attendance
1	2	3	4	5	6	7
1.						
2.						
3.						
4.						
5.						

1. Requested Condonation of attendance in respect of the above candidate/s as the shortage of attendance is within the Condonation limit.
2. The Demand Draft for Rs..... being the Condonation fee of shortage of attendance, drawn in favour of the Registrar, The Tamil Nadu Dr. M.G.R. Medical University, Madras is/are enclosed.

Date :

Signature of the Principal with College Seal

Signature of the Head of the University Departments with seal

Place :

Note :

1. The fee prescribed for Condonation of shortage of attendance is Rs. 50/- per student.
2. The forms should reach the University at least 15 days before the commencement of respective University Examinations.
3. A separate list (Three copies Degreewise) showing candidates who have not earned the requirep attendance and are not eligible for Condonation should also be sent at least 15 days before the commencement of Examinations.

Tamil Nadu Dr. M.G.R Medical University, Madras.

DEGREE OF BACHELOR OF MEDICINE AND SURGERY

[M.B. & B.S.]

SYLLABUS

FIRST M.B. & B.S.

ANATOMY

PART—I

Theory : General Principle of Anatomy, General Micro Anatomy, General Embryology. Principle of Human Genetics. Gross Anatomy, including Osteology, related histology and embryology of upper limb, lower limb, and Abdomen and Pelvis.

Practical : Anatomy

Gross Anatomy - Identification of Anatomical structures in prepared specimens of Upper Limb, Lower Limb, Abdomen, Pelvis in adult cadavers and foctuses.

Micro Anatomy-of General issues of the body and of special tissues if any, in Upper Limb, Lower Limb, Abdomen and Pelvis.

PART—II

Theory : Gross Anatomy, including Osteology, related histology and embryology of Head and Neck. Thorax. Brain and Spinal cord.

Practical :

Gross Anatomy - Identification of Anatomical structure in prepared specimens of Head and Neck, Brain and Spinal cord and Thorax in adult cadavers and foctuses.

Micro Anatomy-of Special tissues in Head and Neck, Brain and Spinal cord and Thorax.

PHYSIOLOGY

In teaching of human physiology, stress will be laid in teaching the *fundamental principles* of the subject with emphasis on physiologic basis of medicine.

THEORY

PART – I

(i) General Physiology of Tissues including Muscle Physiology.

(ii) Blood.

(iii) Digestive System.

(iv) Excretary System.

(v) Endocrinology.

(v) Reproduction.

PART-II

(i) Respiratory System.

(Ii) Cardiovascular System.

(iii) Environmental Physiology.

(iv) Nerve.

(v) Nervous System.

(vi) Special Senses.

DETAILED SYLLABUS

General Physiology of Tissue :

(including Muscle Physiology) :

Introduction to Physiology – Homeostasis.

(Cell and its general physiology)

Types of tissues : Conducting, contractile, supporting lining and secratary tissues with detailed discussion on supporting tissues and contractile tissue. Physiology of coducting tissue will be dealt with in Nervous Syetem.

Supporting tissues : (a) Connective tissue - Structure and functions; Fibroblasts-Its function-Collagen; Elastin: Mast cell and plasma cell and their functions.

(b) Skeletal tissue-Structure of bone; nature of bone issue-mineral matrix; cells of bone and their functions.

(c) Cartilagenous tissue-Structure and functions of cartilage-chondroblast.

Contractile tissues: History of skeletal and smooth muscles including clectron miscroscopic appearance; Characteristics of muscular contraction-isometric and isotonic contractions muscle twitch and its phases-effects of two and multiple stimuli Tetenus, Fatigue and Rigor-motor unit and gradation of muscular activity-Relation between muscle length and contraction-Head production in muscle-Energy source for muscle contraction-Oxygen supply to muscles, red and white muscles-Electrical changes in muscle contraction; electromyography neuromuscular disorders; Physiology of smooth muscle. (Chemical composition and chemistry of muscular contraction to be dealt with in detail in Biochemistry).

Blood :

General composition and functions; Plasma proteins-Origin. Plasmapheresis and functions; Blood volume-measurement, variations and regulation; Hematocrit.

R.B.C. : Structure and functions: Erythroporesis Factor regulating Life span. Hematological indices-C.I., M.C.V., M.C.H., M.C.H.C.; Variations in health and diseases. (Chemistry of Heamoglobin and derivatives will be dealt with in Biochemistry).

W.B.C. : Classification, structure and functions : Leucopoiesis : Life span; Variations in health and diseases.

Thrombocyte : Structure and functions Development; Variations in health and diseases.

Spleen : Structure and fuctions.

Reticulo-endothelial system; Structure and functions;

Coagulation : Mechanism of blood coagulation and hemostasis; Anticoagulants; Clinical tests for clotting; Hemorrhagic disorders.

Blood groups : Classification; Principles of blood grouping; Blood transfusion; Rh factor and its clinical importance; other sub groups of blood and their uses.

Lymph : Composition; origin; regulation and functions.

Digestive System :

Structure and functions of Lining and secretory tissues: Types; functions; Basement membrance-Functions; Appearance of cells during secretion; secretory process; Control of secretory processes; myoepitpelial cell; Composition, mechanism and regulation of secretion and functions of salivary, gastric, pancreatic, intestinal and biliary secretions; Gastro-intestinal, hormones; Motor activity of alimentary tract; mastication, degutition, vomitting, gastrointestial movements and defecation. (Digestion and absorption of foodstuffs will be taught in Biochemistry).

Excretory System :

Kindey : Structure including electronmicroscopic appearances and functions of kidney; Renal circulation-auto regulation; composition of urine; Mechanism of urine formation; regulation of renal function; Physiology of meturition; Endocrine functions of kidney; (Regulation of acid-base balance by kidney and renal function tests will be done in Biochemistry).

Body fluids : Distribution, composition, measurement, and regulation.

Physiology of skin.

Endocrinology :

Hormones-General characteristics; methods of endocrines; Structure and functions and regulation of secretory activities and functional disordors of hypophysis cerebri, parathyroid, thyroid, adrenal cortex and medulla and islct cell of Langorhans and the assay of their hormones: Neuroendocrine inter-relationship; Physiology of stress.

Reproduction :

Testis : Spermatogenesis; Hormones and functions of Testis and their regulation; Functions of male accessory sex glands; Effects of castraction in male; Disorders of testicular functions.

Ovary : Follicular growth, ovulation; formation of corpus luteum and functions of ovary; changes in sexual cycle of women puberty menstruation and menopause; Hypophyscal - Gonadal inter-relationship; effects of castration in female; Disordors of ovarian functions.

Physiology of pregnancy and lactation.

Physiological principles of contraception.

Physiology Part II Syllabus :

Respiratory System :

Mechanics of Respiration-Lung compliance and work of breathing Static and dynamic lung volumes-Intra plcural pressure : pncumothorax-Artificial respiration; Pulmonary ventilation; Ventilation/Perfusion Ratio and pulmonary circulation; Nervous and chemical regulation of respiration; Abnormal types of respiration; Carriage of oxygen and carbondioxide; Therapeutic uses of oxygen; Pulmonary function tests; Hypoxis; Asphyxia, Dyspnoea; cyanosis; Effects of exercise on respiration, Foetal respiration.

Cardiovascullar System :

Cardiac muscle - Structure including electron microscopic appearance and properties; Origin and propagation of cardiac impulse - Junctional tissues - Mechanical events in cardiac cycle; Hemo dynamics of heart volume and pressure changes; Heart sounds: phonocardiogram; Cardiac murmurs; Electrocardiogram-Electrical study of heart; methods for recording ECG; electro-cardiograph leads; normal ECG and its characteristics; Nervous and reflex regulation of heart rate: Cardiac output - Distribution; methods of measurement factors regulating, cardiacreserve, cardiac work and efficiency; Coronary circulation; nutrition and metabolism of cardiac tissues; Arterial blood pressure - values, measurement, regulation variation in health and diseases; venous pressure - values; measurement; jugular pulse tracing; ragulation; clinical importance; Capillary circulation - measurement, regulation; Nervous control of blood vessels - vasomotor centres; vasocons - trictor and dilator fibres; Chemical control of arterioles; Capillary reactions. Trible response; circulation time; Velocity of blood; volume flow of blood; Pathophysiology of shock and cardiac failure; Regional circulation Cerebral circulations; Effects of exercise on circulation.

Environmental Physiology :

Regulation of body temperature; Physiologic response to high altitude; Dysbarism; Elementary avitation Physiology; Elements of space physiology.

Nerve :

Excitability and its measurement; Refractory period in nerve; Structure of nervous tissue; Membrane equilibrium and resting potential; Action potentials; Nervous impulses and its conduction; Transmission in nervous system - Synaptit transmission

Nervous System :

Spinal cord and its functions; Lesions of spinal cord and brainstem; Reflex action and its properties; classification of reflexes.

Sensory system : Cutaneous receptors; Pathway for touch, tactile discrimination thermal and pain sensations; Proprioception-receptors. pathway and higher centres; Pathophysiology of pain; Lesions of sensory system; Thalamus.

Cerebral cortex : Structure; Methods of localisation and functions; Association areas - Pre-frontal lobe its connections and functions.

Motor system : Corticospinal tract-Origin, course and termination - Functions and effects of lesions; Extrapyramidal system; Basal Gangila and their functions; Extrapyramidal pathways; Cerebellum—Structure, connections and functions; Vestbular apparatus; Resticular formation; Stretch reflex; Muscle tone; Postural mechanism; Decorticate and Decerebrate Rigidities; Limbic system and physiology of emotions; Hypothalamus; E.E.G.; Physiology of sleep and consciousness; Learning and memory; Speech and Aphasia; Autonomic Nervous system; Conditional reflex; cerebrospinal fluid.

Special Sensese :

Eye : Structure of eye-ball; Retina, visual fields, visual pathways and effects of lesions; Retinal functions; Photo chemistry of vision; E.R.G. Acuity colour vision; Accommodation —Optical media; ciliary body; lens mechanism of accommodation; Optical defects and their connections; Iris and Pupil; Functions and Reflexes; Intracecular fluids and pressure.

Hearing : Mechanical properties of external and middle car audition ; Cochlear physiology ; central auditory pathway ; Theories of hearing ; Tests for hearing.

Taste ;

Olfaction.

Syllabus for Practicals in Physiology :

The practical classes should cover the topics outlined in the theory syllabus with special emphasis on applied aspects of the subject, particularly clinical applications. Individual experiments wholely performed by the students should not occupy more than half of the total time available in each part of this course. The rest of the practical classes should be allotted to demonstrations of animal and human experiments, presention and discussion of suitable clinical cases, analysis and discussion of experimental or clinical data (dry experiments) and study of experiments or techniques with the aid of films or other audiovisual aids.

The University practical examination at the end of every Part I and II sessions will consist of practical exercises from the experiments, the candidates have actually performed and problems based upon the actual practicals done, demonstrations and discussions. It will be divided into Amphibias and Haematology or Human experiments.

BIOCHEMISTRY

Throughout the course emphasis to be laid on aspects Biochemistry useful to follow physiological principles and chemical applications.

1. Chemistry of carbohydrates, lipids, proteins nucleoproteins and Hemoglobin.

(i) Carbohydrates : Properties of monosaccharides and disaccharides in emphasis on Glucose, Fructose, Galactose, Sucrose, Lactose, Maltose and Pentoses in general Polysaccharides - Starch, Glygogen, Insulin, Mycopolysaecharides-Properties and biological importance.

(ii) Lipids Classification Properties of fattyacids and triglycerids-Classification phospholipids and other compound lipids-their properties and significance - Properties of cholesterol bile acid and steroids.

(iii) Proteins . Classification and properties of aminoacids, classification, structure and properties of proteins. Fundamental study of the structure and properties. Electrophoresis, chromatography, ultra centrifugation, Biochemical aspects of plasma-proteins - immunoglobulins.

(iv) Nucleoproteins - Nucleic acids - Chemistry and structure; structure in relation to function.

(v) Haemoglobin - Structure and properties - Hb derivations abnormal haemoglobins-Prophyrins - Synthesis and breakdown of Hb. Metabolism of bile pigments.

2. (a) Enzymes : Only the fundamental principles of the following will be dealt with.

Definition : Classification - Mechanism of action-Coenzymes-Specificity, enzyme inhibition, Factors influencing enzyme catalysed reaction and enzyme regulation. Enzymes of clinical importance.

(iv) Vitamins : Chemistry and properties, metabolic functions sources, nutritional aspects - Units of measurement - requirement - deficiency manifestations - Hypervitamineses - Antivitamins - Tests to detect vitamin deficiency - Inter relationship to be stressed.

3. Acid base regulations : Acid - bases - Buffers and PH of blood and body fluids and their regulation - their measurement- Acidosis - Alkalosis etc

4. Bio - energetics - mitochondris - Biological oxidation - Electro transport chain and tricarboxylic acid cycle - Energy metabolism - BMR measurement - Variations and significance.

5. Mineral metabolism : Metabolism of calcium and phosphorus magnesium and trace elements, iron copper, iodine etc.

6. Methods of investigation of metabolism-Use of isotopes.

7. Metabolism of carbohydrates-digestion and absorption Synthesis and breakdown of glycogen and its regulation-Breakdown of glucose-formation of lactic acid and Co_2 and water-Hexose monophosphate shunt-Glucuronic acid pathway-Neogluco-genesis Regulatory mechanisms for glycolysis neoglucogenesis.

8. Metabolism of lipids-Digestion and absorption of lipids-Plasma lipids lipoproteins Breakdown of fat and fatty acids (Boxidation) Synthesis of fatty acids and fat Phospholipids-synthesis and breakdown of cholesterol-formation of sterol and steriod derivates and their functions.

9. Metabolism of proteins; Protein biosynthesis Genetic Code Regulation of Protein synthesis ; Breakdown of proteins and aminoacids-Disposal of the nitrogen-Deamination and transmination Urea formation-Disposal of the carbon skeleton decarboxylation - Metabolism of phenylalanine, Tyrosin, tryptophan, Histidine and sulphur containing amino acids. Formation and Significance of physiologically important compounds derived from aminoacids-glucogenic and ketogenic aminoacids. Metabolism and functions of creatin - Essential aminoacids-One carbon-metabolism-transmethylation.

10. Nuclic acid synthesis and breakdown of components, viz., Purines and pyrimidines and their regulations-Functions and biological significance Biologically active necleotides.

11. Chemistry and metabolic functions of hormones.

12. Inter-relationships of metabolism ; Role and regulation by vitamins and hormones.

Blood sugar and Its regulation-diabetes millitus Hypoglycemia. Kotogenesis-metabolism of ketone bodies-Biochemistry of starvation.

Composition of urine - Normal and abnormal constituents. Composition of muscle and biochemistry of muscle contraction.

13. Fundamental of biochemical genetics-Gene regulation.

Concept of inborn errors of metabolism and molecular diseases with few examples only. Fundamentals of immunoglobulins.

14. Nutrition : Caloric requirement-quantitative and qualitative requirement of food materials-role of carbohy dratelipids, proteins and minerals in nutrition-under and over nutrition-Construction of diet.

Practicals : Bio-Chemistry :

Reactions of carbohydrates, lipids and proteins.

Properties of haemoglobin, bile salt and bile pigments.

Hydrolysis of starch by acid.

Exercise to demonstrate the properties of enzymes urease and amylase.

Estimation of glucose in urine, chloride estimation in urine, titrtable acidity of urine.

Gastric analysis - Blood urea-Blood sugar - Urincurea- Milk analysis-Abnormal constitutents in urine.

LECTURE DEMONSTRATION

(to be recorded in Record note book).

(a) B.M.R.

(b) Electrophoresis-Plasma proteins.

(c) Chromatography-Amino acids and sugar.

(d) Measurement of plasma bicar bonate and its significant.

(e) Photometry.

(f) Measurement of pH.

(g) Renal functions tests.

(h) Gastric functions.

(i) Liver function.

(j) G.T.T.

SECOND M B.B S. EXAMINATION

SYLLABUS

PART I—PHARMACOLOGY AND PHARMACOTHERAPEUTICS

Course of study shall include training in the theory and applications of Pharmacology in Medicine and the treatment of common instance of poisoning. A practical course in Basic Principles of Pharmacy and Experimental Pharmacology shall also be imparted.

The scope of training envisaged shall include :

(a) General Pharmacology including Pharmacological principles, responses of cells to drugs and pharmacognetics.

(b) Response of central and automatic nervous system to drugs and their applications to medicine.

(c) Drugs affecting the functions of the heart and circulation and related therapeutics.

(d) Drugs affecting pathological processes like allergy. inflammation, healing and responses of the respiratory system to drugs.

(e) Pharmacological agents affecting blood and functions of blood.

(f) The Pharmacological responses of the reproductive-system.

(g) Effects of Pharmacological agents on homcostasis and kidney function.

(h) Endocrine secretions, their pharmacological effects and treatment of endocrine disorders and the role of hormones and vitamins.

(i) Drugs affecting alimentary tract and disorders of the alimentary tract.

(j) Chemotherapy of infectious and malignant conditions.

(k) Response of the skin and mucous membranes to drug s.

(l) Immunopharmacology including vaccine therapy.

The practical training will include :

(a) Training in prescription writing and dispensing.

(b) Basic principles of Pharmacy.

ANNEXURE I

Pre-Clinical (M.B.B.S.)

GENERAL LECTURES FOR FRESH STUDENTS

By Dean and Senior Professors

1. Introductory Lecture by the Dean
2. History of Modern Medicine.
3. National Health Policies and Programmes, Alma Atta Declaration etc.
4. The organisation of Health Services in the State-Mini Health Centres - Sub - Centres - PHC's - Taluk Headquarters Hospitals- District Headquarters Hospitals - Apex Teaching Institutions- Development of Referal Systems.
5. Some mention in a fundamental way of modern advances in the medical field and its relevame to fundamental research, applied research and interdisciplinary research.
6. Population Dynamics.

ANNEXURE-II (Pre-Clinical-M.B.B.S.)

Topics on BEHAVIOURAL SCIENCES for I M.B B.S. Students:

1. General Behaviour Theories
2. Communication-Interpersonal
3. Human Interaction
4. Doctor Patient relationship
5. Family dynamics and interaction
6. Psychology of Student community
7. Stress management
8. Guidence and Counselling
9. Community Mental Health

ANNEXURE III (Pre-Clinical-M.B B.S)

Topics in Biostatistics for I M.B.B.S. Students:

I Classification and Tabulation
1. Types of classification
2. Frequency distribution
3. Tabulation of data

II. Diagramatic representation of data
1. Characteristics of diagrams
2. Types of diagrams

III. Graphic Representation of data
1. Construction of Graphs
2. Graphs of Time series of Histograms
3. Range zone graph
4. Graphs of Frequency distribution
5. Cumulative Frequency curves of ogives

IV. Demographic Rates
1. Crude death and birth rates
2. Standardised death and birth rates
3. General Fertility rates
4. Specific Fertility rates
5. Gross and Net Reproduction Rates

V. Measures of Central Tendency
1. Arithmetic Mean
2. Median
3. Mode
4. Geometric Mean
5. Harmonic Mean

VI. Measures of Dispersion
   1. Range

VII. Corrolation Analysis
   1. Types of corrolation
   2. Coefficient of corrolation
   3. Rank corrolation
   4. Scatter Diagram

VIII. Theory of Probability

IX. Theory of Sampling
   1. Principles of sampling
   2. Types of sampling

X. Tests of significance
   1. Significance Tests in Large samples
   2. Significance Tests in small samples
      a) Student's "T" Test
      b) F - Test

XI. Chi-Sguare Test
   1. $\times^2$ — Test for goodness of fit
   2. $\times^2$ — Test 2 $\times$ 2 contingency table
   3. $\times^2$ — Test in manifold Tabulation

XII. Non Parametric Test
   1. Nil comon's signed Rank Test
   2. Mann — Whitney U — Test

ANNEXURE IV - (Pre-Clinical - M.B.B.S.)

Topics in Biophysics for I M.B.B.S.

I. Physical solution-Properties
   Phase Rule
   Gel
   Colloids - Brownian movements - Einstein-Stokes Law
   Viscosity and surface tension
   Diffusion
   Osmasis
   Gibbe-Dornan's Equilibrium
   Transport mechanisms-passive and active.

II. Ph and Hydrogenion concentration
   Buffers of the blood
   Ph of the blood-regulation. Clinical significance

III. Measurement of energy exchange
   First Law of Thermodynamics
   Direct and indirect methods of colorimetry
   Caloric values of food stuffs
   Calculation of basal metabolic rate.

V. Mechanics of skeletel muscle contraction
   Biophysics of circulation
   a) Physical characteristics of blood
   b) Blood flow thro' vessels
      i) Laminar flow
      ii) Turbulent flow
      iii) Reynold's number
   c) Poiseulle's Law
   d) Bernoulli's Principle

e) Laplace Law
f) Peripheral resistance
g) Critical closing pressure
h) Vascular compliance
i) Papperlieinner's plasma skimming effects

VI. Biophysics of respiration
a) Lung and chest movements
b) Lung function tests
c) Gas Law

VII. Electrophysiology
a) Membrane Resting potential
— Transmembrane potentials
— Resting potential
— Equillibrium potential
— Nerust Fquation
— Coldman's equation

b) Action potentials } fast / slow
— Depolarisation
— Theshold
— Rising phase
— Repolarisation
— After depolarisation
— After Hyperpolarisation
— Refractory period and accommodation
— Conic changes

c) Prapagation of action potential
d) Axon excitability and conduction velovity
e) Saltatory conduction
f) Compound action potentials
g) Cardiac and smooth muscle action potentials
h) Synaptic transmission-inhibitory and excitatory
i) Clinical applications
i) Electro Cardiogram (ECG)
ii) Electro Encephalogram (EEG)
iii) Electro Myogram (EMG)
iv) Electro Oculargram (EOG)
v) Electro Retinogram (ERG)

VIII. Elements of atomic physics
— radio activity
— Isotopes

IX. Ultrasonic infra red, ultra violet rays and ionising and magnetic radiation.
— physiological effects.

c) Experimental Pharmacology including a knowledge of handling common laboratory animals, simple experimental techniques, recording methods, collection of data and interpretation of results and assay of chemicals by biological methods.

PART I—PATHOLOGY AND MICROBIOLOGY

Pathology

Principles of Pathology :

History, scope and content of Pathology.

Cell structure and ultrastructure in Disease.

Degenerations and infiltrations. Necrosis and gangrene.

Disorders of minerals and pigments.

Effects of physical and chemical trauma.

Nutritional and Metabolic disorders. Deficiency diseases.

Circulatory disturbances. Fluid and elctrolyte balance. Inflammation and repair.

Infections. Common parasitic, fungal, bacterial, rickettsial and viral infection.

Tissue respons-Immunity and Hyper sensitivity. Organ transplantation.

Tumors - Etiology, classification. morphology. behaviour, diagnosis and spread of neoplasms.

Genetics and disease.

Microbiology

General Microbiology. Parasitology including elementary Mycology.

Introduction to Microbiology :

1. Scope of Microbiology.
2. Microbiology in relation to health and disease.

History of Microbiology :

Classification of Micro Organisms :

1. Bacteria.
2. Fungi.
3. Viruses.
4. Rickettsiae.
5. Protozoa.

General properties of Bacteria, Anatomy of Bacteria. Paysiology of Bacteria, Bacterial Genetics, Sterilisation and Disinfection.

Identification of Bacteria :

1. Morphology.
2. Cultural Characteristics.
3. Biochemical reactions.
4. Serological reactions.
5. Animal Pathogenicity.

Bacteria in Health :

Normal Bacterial flora.

Bacteria in Disease :

1. Pathogenicity and virulence.
2. Infection and resistance.

Antibiotics and Chemotherapy :

Parasitology :

1. Introduction to parasitology, parasites, Parasitism, evolution of Parasites and host parasitc relationship.
2. General principles of diagnosis obtaining specimens for diagnosis methods of staining methods.
3. Classification of parasites.

Protozoology :

1. Classification and the study of pathogenic protozoa belonging to :

   (a) Rhizopoda, (b) Mastigophora, (c) Sporozoa, (d) Ciliata.

Helminthology :

1. Classification and the study of pathogenic helminths belonging to cestodoa, Trematoda and Nematoda.

Elementary Mycology :

Characterization of fungi-method of identification of fungi and elementary knowledge of the common Pathogenic fungi and laboratory contaminants.

SECOND M.B.B.S.

PART – II

SYSTEMIC PATHOLOGY (APPLIED PATHOLOGY)

Pathology

Different facets of pathology - Comparative, Experimental, Geographic Pathology.

Autopsy in study of disease.

Disorders of blood and endocrines.

Detailed Pathology of individual organs and organ systems.

Clinical pathology-Techniques principles and application of common laboratory procedures.

APPLIED MICROBIOLOGY INCLUDING IMMUNOLOGY AND VIROLOGY

Applied Microbiology

Study of the Pathogenic Bacteria belonging to the following genera and their laboratory diagnosis.

1. Staphylococcus.
2. Streptococcus.
3. Pneumococcus.
4. Neisseriac.
5. Coryncbacteriac.
6. Mycobacteriac
7. Actinomycetes.
8. Salmonella.
9. Shigella.
10. Vibrio & Pseudomonas.
11. Pastcurella.
12. Brucella.
13. Heamophilus and Bordetella.
14. Intestinal Commensals.
15. Bacillus.
16. Clostridium.
17. Miscellaneous Bacteria.
18. Spirochactes.
19. Rickettsiac.
20. Chalmydiac.

Immunology :

1. Immunity.
2. Natural defence mechanisms.
3. Acquired immunity.
4. Antigen, antibodies & their formation & reactions.
5. Hypersensitivity, allergy, auto immunity and transplantation immunity.
6. General principles of immunization & immunization schedules.

Virology :

1. General properties of viruses.
   (a) Anatomy of viruses.
   (b) Biology of viruses.
   (c) Cultivation of viruses
2. Classification of viruses
3. Identification of viruses.
4. The study of elementary knowledge of the following common pathogenic viruses.
   (a) Pox viruses.
   (b) Myco viruses.
   (c) Herpes viruses.
   (d) Arbo viruses.
   (e) Picorna viruses.
   (f) Miscellaneous viruses.
   (g) Bacteriophages-their application & uses.

ANNEXURE—I (Para-Clinical)

TOPICS FOR 10 LECTURES ON HEALTH ECONOMICS

To be introduced in II M.B.B S. Course

1. Health and Economic Development — One hour
2. Significance of Health Economics in Health Care Services
3. Application of Basic Economic Concepts to Health Care Services — One hour
4. Resources and Finance in Health Care Services
5. Production, Costs and Supply of Health Care Services — One hour
6. Need, Demand and Consumption of Health Services
7. Economics of Health Manpower Planning — One hour
8. Principles of Management and evaluation of Health Care Delivery System
9. Health for All By 2000 AD — One hour

Final M B.B.S. - Syllabus for Forensic Medicine

TOXICOLOGY OF COMMON POISONS AND TREATMENT OF POISONING

Legal Procedure in Criminal Courts.

Personal Identity.

Post-Mortem Examination (Autopsy).

Exhumation.

Examination of Biological Stains and Hair.

Death in its Medico-legal Aspects.

Deaths from Asphyxia.

Death from Starvation Cold and Heat.

Injuries from Burns, Scalds, Lightning and Electricity.

The Medico-legal Aspects of Wounds.

Regional injuries.

Impotence Sterility and Artificial Insemination.

Virginity Pregnancy and Delivery.

Legitimacy.

Sexual offences.

Abortion.

Infanticide.

Insanity and Its Medico-legal aspects.

Law in Relation to Medical Men.

Opthalmology and Oto-Rhino-Laryngology

The course of study in Opthalmology shall cover the common diseases of the eye principles of refraction and the use of the Opthalmoloscope with hospital attendance for a period of two months.

The course of study in Oto-Laryngology shall cover the common diseases of the car, nose and throat including the use of the Otoscope, Laryngoscope and Rhinoscope, with hospital atten dance for a period of six weeks.

Forensic Medicine

Vide Syllabus.

Community Medicine (Social and Preventive Medicine)

The importance of the preventive aspects of Medicine should be stressed throughout the period of instruction of the clinical studies and in relation to each one of the subjects studied :

Instruction shall include :

(a) General Principles of Hygiene.

(b) The principles of preventive Medicine including Epidemiology.

(c) The influence of heredity and environment including occupation on health and disease.

(d) The principles of Health Education.

(e) Rural Sanitation.

(f) Demography.

(g) Family Health.

(h) Regional and National Health Programmes including Social, Maternity and Child Health and Mortality and Morbidity Statistics.

(i) Batches of students shall be sent to the various urban centres and rural centres for 10 or 15 days to get orientation in community medicine. Two families shall be allotted to each student during the course, to keep in touch with all the health problems, so that an effective training in the subject is obtained with emphasis on Community Medicine.

Medicine

(a) Detailed course of study : Duration : A course of systematic instruction in the principles and practice of Medicine including Paediatrics.

(i) A course of instruction in Psychological Medicinc for a period of one month.

(ii) A Medical Clinical Clerkship for a period of ten months, of which at least three months in the out-patient department.

(iii) A Clinical clerkship for not less than three months in a Children's ward of hospital or in a children's out-patient department.

(iv) Lecture demonstrations in Clinical Medicine during atleast two years, which may run concurrently, with the surgical Practice.

(v) Lectures in Therapautics and prescribing including (i) Pharmacological therapautics, (ii) the methods of treatment by vaccines and sera, (iii) Physical medicine. (iv) Dietetics and (v) the Principles of Nursing.

(vi) Instruction in applied Anatomy and Physiology throughout the period of Clinical Studies.

(vii) Instruction throughout the period of Medical Clerkship in clinical pathology, including Theory and Practice of Immunization.

Attendance at each of the following deprtments for a period of 15 days out of which not more than six shall be for lecture demonstrations:

(i) Acute Infectious Diseases.

(ii) Tuberculosis.

(iii) Psychological Medicine and Psychiatry.

(iv) Diseases of Skin.

(v) Leprosy.

(vi) Radiology and Electro-Therapautics in their application to Medicine.

(vii) Dietetics and Principles of Nursing.

(viii) Physical Medicine and Rehabilitation.

(Instructions in the subjects (i) to (viii) may run concurrently with the course of instructions in Medicine.)

Surgery

(a) Detailed course of study: Duration: A course of systematic instruction in the principles and practice of Surgery.

(b) A surgical dressership for a period of ten months of which alteast three months shall be in the outpatient department and one month in Orthopaedics.

(c) Practical instruction in surgical methods including Physical Medicine.

(d) Practical instruction in Minor Surgery.

(e) Instruction in the Administration of Anaesthetics.

(f) A course of instruction in Operative Surgery.

(g) Instruction in Applied Anatomy and Physiology throughout the period of Clinical Studies.

(h) Instruction throughout the period of surgical dressership in clinical pathology.

Attendance at each of the following departments for a period of 15 days out of which not more than six shall be for lecture demonstrations.

(i) Radiology and Radiotherapy in their application to surgery.

(ii) Veneral diseases.

(iii) Orthopaedics.

(iv) Dental Diseases.

(v) Surgical diseases of Infancy and childhood.

(vi) Anaesthesiology.

Note : Each student during this period of clinical clerkship and surgical Dressership in the wards, shall have continuosly in his sole charge as clinical clerk and dresser respectively, not less than five beds. The candidates will also attend to medical and surgical emergencies during this period.

In calculating the number of beds available for teaching purposes all beds which are so used can be included but provision of beds available for teaching purposes shall be such that number of beds to students annually admitted into the College does not fall below the ratio 5 : 1 of which not less than one thrid shall be devoted to General Medicine and one third to Generai Surgery.

Obstetrics and Gynaecology including Diseases of the New Born and Family Planning

(a) Detailed Course of study : Duration

Course of Systematic instruction in the principles and practice of Gynaecology and Infant. Hygiene and attendance on the Obstetrics, Gynaecology, including Applied Anatomy and Physiology of pregnancy and Labour, diseases of New Born and Family Planning.

(b) Lecture demonstrations in Clinical Obstetrics and Gynaecology and Infant Hygiene and attendance on the practice of a maternity Hospital or the Maternity Wards of a general Hospital including (i) antenatal care and (ii) the management of the puerperium and on inpatient and out patient gynaecological practice for a period of at least six months.

Not less than three months of this period shall be devoted exclusively to instruction in these subjects and shall be subsequent to the medical clinical clerkship section (a) Medicine and the surgical dressership section, (b) Surgery. Not less than two thirds of the hours of clinical instruction shall be given to obstetrics including antenatal care and infant hygiene.

(c) Of this period of clinical instruction not less than one month shall be spent an a resident pupil either in a maternity hospital or in a hospital attached to a Maternity hospital or to the maternity wards of a General Hospital. The students shall during this month conduct at least 20 cases of labour under adequate supervision.

A certificate showing the number of cases of labour attended by the student in the maternity hospital and in the patient's home respectively should be signed by a responsible medical officer on the staff of the hospital and should state :

(i) That the student has personally conducted each case during the course of labour making the necessary abdominal and other examinations under the supervision of the certifying officer who should describe his official position.

(ii) That satisfactory written histories of the cases conducted including when possible ante-natal and post-natal observations were presented by the student and initialled by the supervising officer.

ANNEXURE - III

Clinical Postings in Departments

The following may be used as a general guideline. Some variations may have to be made from College to College.

I. Clinical Year

Prelim. postings	2 months
Medicine	2 months
Paediatrics	1 month
Obstetrics & Gynaecology	1 month
Surgery	2 months
Clock Posting in Community Health	2 weeks

II. Clinical year (first half)

Medicine	1 month
Surgery	1 month
Specialities any two	1 month each

II. Clinical year (Second half)

ENT	1 month
Opthalmology	1 month
Forensic Medicine	2 weeks
Psychatry	1 month
Clock Posting in Community Health	2 weeks

III. Clinical year

Medicine	2 months
Surgery	2 months
Orthopaedics	1 month
Paediatrics	1 month
Obstetrics & Gynaecology	3 months

LIST OF BOOKS RECOMMENDED FOR STUDY

I. Anatomy

1. Gray's Text-book of anatomy—edited py T. J. Johnson and J. Whillis.
2. Cunningham's Manual of Practical Anatomy—Revised and Edited by James Couper Brash - 3 Vols.
3. Synopsis of Surgical Anatomy—Alexander—Mec Gregor.
4. Anatomy—W. J. Hamilton (Mac.)

II. Physiology

***Text Books*:**

1. Introduction to human Physiology by Green.
2. Text-book of Physiology and Biochemistry by G. H. Bell, J. N. Davidson and H. Searborough.
3. Samon Wright's Applied Physiology by C. A. Keele and E. Neil.
4. The Physiological basis of Medical Practice by C. H. Best and N. B. Taylar.
5. A text-book of Practical Physiology by V. G. Ranade.

Additional reading for reference only :

1. Starling and Lovatt Evans Principles of human Physiology by H. Daveson and M.G. Eggleton.
2. Physicology and Biophysics by T.C. Ruch and H.D. Patton.
3. Medical Physiology by Philip Bard.
4. Text-book of Physiology—Sarada Subramanian (O.L.)

III. Biochemistry

1. Review of Physiological Chemistry by Harold A. Harper.
2. Biochemistry by Abraham Cantarow and Bernard Schepartz.
3. Biochemistry by S. P. Datta and J. H. Ottaway.
4. Biochemistry by Kleiner and Orten.
5. Biochemistry for Medical Students by Thorpe.

Additional reading for reference only :

1. Text-book of Biochemistry by West and Toold.
2. Biochemistry by Karlson.
3. Dynamic aspects of Biochemistry by Baldwin.

IV. Histology :

1. Text-book of Histology for Medical Students by Hewer.
2. Schafers Essentials of Histology—Edited by H.M. Carleton and E. H. Leach.

V. Pharmacology :

Recommended Text Books

1. Pharmacology and Pharmacotherapeuctics by J. C. David, V. Iswariah and M. N. Guruswami.
2. Clinical Pharmacology by D. R. Lawrence.
3. Applied Pharamacology, by Andrew Wilson and H O. Schild.

Additional reading for reference only :

1. The Pharmacological Basis of Therapeutics, by Louis S. Goodman and Alfred Gilman.

2. Pharmacologic Principles of Medical Practice, by John C. Krantz and C. Jelleff Carr.
3. Review of Medical Pharmacology, by Frederick H. Meyers, Ernest Jawatz and Alan Goldfien.

VI. Pathology :

1. Text Book of Pathology by William Boyd.
2. Pathology by Robbins.
3. Pathology by Anderson.
4. Histopathology by Ogilve.
5. Post Mortem appearances by Ross.

Additional reading for reference only:

1. General Pathology by Florey
2. Pathology (2 volumes) by Payling Wright.
3. Pathology for Physicians by William Boyd.
4. Pathology for Surgeons by William Boyd.
5. Surgical Pathology by Illingworth.

VII. Bacteriology :

1. Bigger's Bacteriolagy and immunology for Students of Medical F. S. Stelwart.
2. Text Book of Microbiology by Burdon.
3. Medical Microbiology by Cruiekshank.
4. Medical Bacteriology by Dey.
5. Text Book of Bacteriology by R. W. Fair Brother.

Additional reading for reference only :

1. Zipser Microbiology by Smith, Conant and Overman.
2. Review of Medical Microbiology by Jawetz Meinick and Adelberg.
3. Topley and Wilson's Principles of Bacteriology and Immunity by G. S. Wilson A. A. Miller.

VIII. Parasitology :

1. Parasitology by K. D. Chaterjee.
2. Medical Parasitology by Sawitz.

IX. Hyglenc :

Treatise of Hygienc—Public Health by B. N. Ghosh.

X. Ophthalmology :

1. Parsons' Diseases of the Eye-Edited by Sir Stewart Duke Elder, 1954.
2. Diseases of the Eye-May and Worth.

Additional reading :

1. Neame and Noble Handbook of Ophthalmology.
2. Austin's Handbook of Ophthalmology.
3. The Eye and its diseases—Edited by C. Berens.

XI. Forensic Medicine :

1. A Text book of Medical Jurisprudence and Toxicology by J. P. Modi.
2. Forensic Medicine by Keith Simpson
3. Medical Jurisprudence and Toxicology by J. Glaister—Power of poisoning Christopher Johnson.
4. Medical Jurisprudence for India—Lyons.

XII. Medicine :

(a) Text-book of Medicine by

1. Price Frederick. W.
2. Sir John Conybeare.
3. C. E. Reaumounti.
4. Medicinc—Clinical skills by Ion A. D. Bouchien & John S. Aornis (Mac.)

(b) Clinical Medicine by :

1. Savile—Edited by E. C Warna.
2. Hutchson and Hunter (Sir Robert Hutchinson & Donald Hunter).

(c) Tropical Medicine by :

1. Mauson—Bahr (Sir Philip M. Mansan—Bahr).
2. L. Everard Napier.
3. Bannerji.

(d) Therapeutics :

1. Pharmaology in clinical practice by Harry Beckiman.
2. Modern Treatment-A guide for general practice by Austin Smith & Paul L. Wermer.
3. Text-book of Medical Treatment—Dunlop D. M. Davidson, L.S.P. and Me. Nee J. W.

XIII. Surgery :

1. A Short Practice of Surgery by H. Bailey & R. J. McNell Love.
2. Rose and Charless' Manual of Surgery by Wakeley (S.C.)
3. The Essentials of Modern Surgery—R. M. Hand field Jones and Sir Arthur E. Povitt.

4. Surgical Anatomy by Lee Me Greggor.

5. Surgical Pathology by Chares F. W. Illingworth and Bruce M. Dick.

6. Operative Surgery by Sir F. Treves (Barnet). 9th

Additional reading :

1. Extensile Exposures in Limb Surgery by A. K. Henry.

2. Orthopaedic Surgery by Sir Walter Mercer.

3. Fractures and other bone and joint injuries by Sir Beginald Watson—Jones Vols. I and II.

4. Clinical Methods of Surgery by K. Das.

5. Physical Signs in Clinical Surgery by Hamilton Bailey.

6. Science and Prnctice of Surgery by W.H.C. Romanis and P. H. Mitchiner.

XIV. Midwifery :

1. Text-book of Midwifery by Sir A. Lakshmanaswamy Mudaliar.

2. Text-book of Midwifery by R. W. Johnson & Kellar.

3. Text-book of Gynaecology by Wilfred Shaw.

Additional reading :

1. Text-book of Gynaecology by Masani.

2. Text-book of Gynaecology by Ten Teachers.

3. Text-book of Gynaecology by Wilfred Shaw.

XV. Psychiatry :

Text-book of Psychiatry by

1. D. K. Henderson & R, D. Quiliespu.

2. Intoduction to Psychological Medicine by Gorden, R. G, and others.

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