

# **CHETTINAD ACADEMY OF RESEARCH AND EDUCATION**

**(Deemed to be University under section 3 of the UGC Act, 1956)**



## **FACULTY OF MEDICINE**

### **BACHELOR OF MEDICINE AND BACHELOR OF SURGERY**

#### **REGULATIONS & SYLLABUS**

**2019 – 20**

**CHETTINAD ACADEMY OF RESEARCH AND EDUCATION**  
**Regulations for Bachelor of Medicine and Bachelor of Surgery**  
**2019-20 onwards**

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**CHETTINAD ACADEMY OF RESEARCH AND EDUCATION**  
**Regulations for Bachelor of Medicine and Bachelor of Surgery**

The Academic Council of the University hereby makes the following regulations:

**1. Short Title and Commencement:**

These Regulations shall be called 'The Regulations for Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) Degree Course' of Chettinad Academy of Research and Education. These regulations shall be deemed to have come into force from the academic year 2019-20. These regulations are subject to modifications as may be approved by the Academic Council from time to time.

**2. Eligibility for Admission:**

(1) Age limit: Eligibility for appearing in NEET (UG) is as stipulated in Indian Medical Council Act-1956 as amended in 2018. Eligibility as per regulations is as follows:

- i. He/she has completed age of 17 years at the time of admission or will complete that age on or before 31st December of the year of his/her admission to the 1st year MBBS/BDS Course.
- ii. The upper age limit for NEET (UG) is 25 years as on the date of examination with relaxation of 5 years for the candidates belonging to SC/ST/OBC category and persons entitled for reservation under the Rights of Persons with Disabilities Act, 2016.
- iii. Indian Citizens/ Overseas Citizens of India intending to pursue MBBS/ BDS from a foreign Medical/ Dental Institute also need to qualify NEET (UG).

(2) Qualifying examination: as given in the official website for NEET

(3) Selection of Students:

The selection of students to MBBS course shall be based solely on merit list of the candidates in the National Eligibility cum Entrance Test as drawn by the admitting/counseling authorities in the respective categories.

(4) 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 fee along with the application form before seeking admission. The application form and the details for obtaining Eligibility Certificate may be received at the University office.

### 3. Registration:

A candidate admitted to the Course shall register with the University by submitting the prescribed application form for Registration duly filled along with the prescribed fee and a declaration in the format as in Annexure-I to the Registrar of this University through the Head of the Institution within 30 days from the cut-off date prescribed for M.B.B.S. course for admission.

### 4. Course of Study:

(1). Every student shall undergo a period of certified course of study extending over 4 1/2 academic years followed by one year of compulsory rotating internship.

(2). The period of 4 1/2 years is divided into three phases as follows:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundation Course	I MBBS			
I MBBS								Exam I MBBS	II MBBS		
II MBBS								Exam II MBBS	III MBBS		
III MBBS Part I									Exam III MBBS Part I	Electives & Skills	
III MBBS Part II											
Exam III MBBS Part II		Internship									
Internship											

### Distribution of subjects by professional phase

Phase & Year Of MBBS Training	Subjects & New Teaching Elements	Duration	University Examination
First professional MBBS	<ul style="list-style-type: none"> <li>• Foundation course (1 month)</li> <li>• Human Anatomy, Physiology &amp; Biochemistry</li> <li>• Introduction of Community Medicine, Humanities</li> <li>• Early Clinical Exposure</li> <li>• Attitude, Ethics and Communication Module (AETCOM)</li> </ul>	1+ 13 months (including examinations)	Professional
Second Professional MBBS	<ul style="list-style-type: none"> <li>• Pathology, Microbiology, Pharmacology, Forensic Medicine and Toxicology</li> <li>• Introduction to clinical subjects including community Medicine</li> <li>• Clinical Postings</li> <li>• AETCOM</li> </ul>	12 months (including examinations)	II Professional
Third Professional MBBS Part I	<ul style="list-style-type: none"> <li>• General Medicine, General Surgery, OBG, Paediatrics, Orthopedics, Dermatology, Psychiatry Otorhinolaryngology, Ophthalmology, community medicine, Forensic Medicine and Toxicology, Respiratory Medicine, Radiodiagnosis &amp; Radiotherapy, Anaesthesiology</li> <li>• Clinical Subjects / postings</li> <li>• AETCOM</li> </ul>	13 months (including examinations)	III Professional (Part I )
Electives	<ul style="list-style-type: none"> <li>• Electives, skills and assessment</li> </ul>	2 months	
Third Professional MBBS Part II	<ul style="list-style-type: none"> <li>• General Medicine, Paediatrics, General Surgery, Orthopedics, Obstetrics and Gynaecology including Family welfare and allied specialties</li> <li>• Clinical Postings/subjects</li> <li>• AETCOM</li> </ul>	13 months (including examinations)	III Professional (Part II)

- Assessment of electives shall be included in Internal Assessment

Distribution of hours of teaching shall be as given in Annexure-II

### 5. Commencement of the Course:

The course shall ordinarily commence from 1<sup>st</sup> August of the academic year.

**6. Curriculum:**

The Curriculum and the Syllabus for the course shall be as specified in the pages appended to these Regulations.

**7. Medium of Instruction:**

English shall be the medium of instruction for all the subjects of study and for examination.

**8. Working Days:**

Each academic year shall consist of not less than 240 working days.

**9. Attendance:**

a) No candidate shall be permitted to anyone of the parts of MBBS examinations unless he/she has attended the course in the subject for the prescribed period 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) To appear in any part of MBBS examinations, a candidate shall produce the necessary certificate of study, attendance and progress from the Head of the Institution.

d) Failed candidates who are not promoted to the next phase of study are required to put in minimum 80% attendance during the extended period of study before appearing for the next examination.

**10. Condonation of Lack of Attendance:**

The discretionary power of condonation of shortage of attendance to appear for University Examination rests with the Vice Chancellor. Lack of attendance can be condoned up to a maximum of 5% of the minimum attendance required in the following exceptional circumstances:

- (i) Any illness/ accident (for which Medical certificate from a registered medical practitioner must be produced)
- (ii) Any unforeseen tragedy in the family (should produce the letter from the parent/guardian)
- (iii) Participation in NCC/NSS and other co curricular activities representing the Institution / University. (Certificate from competent authority is required)

For any of the above reasons, request shall be made by the candidate with prescribed fees to the Controller of Examination through proper channel, ten days prior to the commencement of the theory examination. Based on the recommendation of the Head of the Institution, the Controller of Examination shall obtain the approval of the Vice Chancellor for admission of the candidate to the University Examination.

### 11. Commencement of the examinations

University examinations shall be held as given in the following table.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundation Course	I MBBS			
I MBBS								Exam I MBBS	II MBBS		
II MBBS								Exam II MBBS	III MBBS		
III MBBS Part I								Exam III MBBS Part I	Electives & Skills		
III MBBS Part II											
Exam III MBBS Part II		Internship									
Internship											

### 12. Cut-off dates for admission to examinations:

The candidates shall be admitted as per the directions of the Medical Counseling Committee, Directorate General of Health Services under the Ministry of Health and Family Welfare.

### 13. Internal Assessment:

Internal assessment shall be based on day-to-day assessment. It shall relate to different ways in which learners participate in learning process including assignments, preparation for seminar, clinical case presentation, preparation of clinical case for discussion, clinical case study/problem solving exercise, participation in project for health care in the community, proficiency in carrying out a practical or a skill in small research project, a written test etc.

1. Regular periodic examinations shall be conducted throughout the course. There shall be

no less than three internal assessment examinations in each Preclinical / Para-clinical subject and no less than two examinations in each clinical subject in a professional year. An end of posting clinical assessment shall be conducted for each clinical posting in each professional year.

2. In subjects that are taught at more than one phase, proportionate weightage must be given for internal assessment for each Phase. For example, General Medicine must be assessed in second Professional, third Professional Part I and third Professional Part II, independently.

3. Day to day records and log book should be given importance in internal assessment. Internal assessment should be based on competencies and skills. Learners must secure at least 50% marks of the total marks (combined in theory and practicals / clinicals) assigned for internal assessment in a particular subject in order to be declared successful at the final University examination of that subject.

4. A candidate who has secured 35% in the internal assessment but not 50% may be provisionally permitted to appear for university examination. However, he/she has to successfully complete the remediation measures prescribed by the institution/ university as the case may be, prior to the declaration of his/her results in that particular phase. Failure to meet prescribed 50% marks in Internal assessment after availing remedial measures will lead to annulment of the results of the candidate in that particular subject(s) in the university examination.

#### **14. Submission of laboratory record note books:**

*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 evaluated by 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 are allowed for reference during the practical examinations.



In respect of failed candidates the marks awarded for the records at the previous examinations will be carried over to the next examinations. If a candidate desires he/she may be permitted to improve his/her performance by submission of fresh records.

*Practical/Clinical record note books (for Third Professional):*

Every student must maintain a record of the practical / clinical work assigned to him / her in the record note books. These shall be submitted periodically to the respective Professors. At the end of the course, the practical / clinical case record note books shall be submitted to the Heads of the Departments who shall evaluate and include the marks in the Internal Assessment.

Records need not be submitted at the University practical examination in Third Professional.

**15. University Examination:**

(1) Commencement of examination\_:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundation Course	I MBBS			
I MBBS								Exam I MBBS	II MBBS		
II MBBS								Exam II MBBS	III MBBS		
III MBBS Part I								Exam III MBBS Part I	Electives & Skills		
III MBBS Part II											
Exam III MBBS Part II		Internship									
Internship											

(2). Exemption in passed subjects:

Candidates, who fail in an examination but obtain pass mark in any subject, shall be exempted from re-examination in that subject.

(3). Carry over of failed subjects:

(These regulations shall be as directed by the statutory body - as per the Graduate Medical Regulations 2019 as and when the same is updated)

**16. Pattern of University Examination:**

The pattern of examination shall be as specified in the Annexure-III to these regulations.

**17. Marks qualifying for a Pass:**

It is mandatory to get 50% marks in theory and practical (practical = practical/clinical + viva) separately to pass. In subjects that have two papers, the learner must secure at least 40% marks in each of the papers with minimum 50% of marks in aggregate (both papers together) to pass.

Phase of Course	Written-Theory – Total	Practicals/Orals/ Clinicals	Pass Criteria
<b>First Professional</b>			<u>Internal Assessment:</u> 35% separately in theory and practical for eligibility to appear for University Examinations  <u>University Examination</u> Mandatory 50% marks in theory and practical (practical = practical/ clinical + viva)
Human Anatomy - 2 papers	200	100	
Physiology - 2 papers	200	100	
Biochemistry - 2 papers	200	100	
<b>Second Professional</b>			
Pharmacology - 2 Papers	200	100	
Pathology - 2 papers	200	100	
Microbiology - 2 papers	200	100	
<b>Third Professional Part – I</b>			
Forensic Medicine & Toxicology - 1 paper	100	100	
Ophthalmology – 1 paper	100	100	
Otorhinolaryngology – 1 paper	100	100	
Community Medicine - 2 papers	200	100	
<b>Third Professional Part – II</b>			
General Medicine - 2 papers	200	200	
General Surgery - 2 papers	200	200	
Pediatrics – 1 paper	100	100	
Obstetrics & Gynaecology - 2 papers	200	200	

**18. Revaluation of answer papers\***

There shall be no revaluation of answer papers of failed candidates. Failed candidates are however permitted to apply to the University within fifteen days of publication of the results for re-totalling of their answer papers.

*\*(Amended as follows as per resolution passed in the XXXV meeting of Academic Council on 10.03.2020 and 46<sup>th</sup> meeting of the Board of Management on 20.03.2020.)*

Students are permitted to apply for photocopy of the answer script or apply for revaluation of answer script (after applying for photocopy) as per the norms of the institute for all examinations from June 2020 session onwards in supersession of the above clause.

### **19. Temporary break of study**

- (a) A candidate is not normally permitted to temporarily break the study.
- (b) If a candidate is continuously absent from the institute for four or more weeks,
  - i) having informed the Dean/Principal within this period, this absence shall be treated as "Temporary Break of Study".
  - ii) without informing the Dean/Principal, his/her name will be removed from the institute rolls.
- (c) If a candidate is compelled to temporarily break study for valid reasons (such as accident or hospitalization due to prolonged ill health), he/she shall apply for condonation of the same to the Dean/Principal through the Head of the Department.
- (d) For condonable break of study
  - i. if the lack of attendance is within condonable limits as per Clause No. 10 & 11, the candidate shall be permitted to write the examination for the current year.
  - ii. if there is non-condonable lack of attendance, the candidate shall rejoin the program at the respective year after the break and shall be governed by the rules and regulations in force at the time of rejoining.
- (e) In any case, a candidate shall be permitted to temporarily break the study only once during the entire duration of the program. The candidate shall forfeit the registration in case of a second break or in case of a non-condonable break of study.
- (f) Without prejudice to the above rules, the candidate who has completed the attendance requirement for a year but has proceeded on a condonable break of study without appearing for the University Examination, shall be permitted to appear for the examinations without repeating the year and thereafter continue the subsequent period of study.

### **20. Migration / Transfer of candidates:**

Migration from one recognized Medical College to another recognized Medical College is not a right of a student. However, migration of students from one recognized medical college to another recognized medical college within India may be considered as per the regulations of the statutory body.

**SCHEME OF EXAMINATION**

Bachelor of Medicine and Bachelor of Surgery

**First MBBS**

S. No	Paper	Hours Per Year				Evaluation (Marks)					
		Lecture Hours	SGT/Tutorials/Integrated learning/Practical	Self Directed Learning	Total	I A		University Exam			Total
						Theory	Practical	Theory	Practical	Orals	
1	Human Anatomy – I	220	415	40	675	50	50	100	60	40	300
2	Human Anatomy – II							100			
3	Physiology - I	160	310	25	495	50	50	100	60	40	300
4	Physiology - II							100			
5	Biochemistry - I	80	150	20	250	50	50	100	60	40	300
6	Biochemistry - II							100			
7	Early Clinical Exposure	90	-	-	90	*	*	-	-	-	-
8	Community Medicine	20	27	5	52	*	*	-	-	-	-
9	AETCOM (Attitude, Ethics & Communication Module)	-	26	8	34	-	-	-	-	-	-
10	Sports and Extracurricular Activities	-	-	-	60	-	-	-	-	-	-
11	Formative Assessments and Term Examinations	-	-	-	80	-	-	-	-	-	-
	<b>Total</b>				1736						

## SCHEME OF EXAMINATION

## Bachelor of Medicine and Bachelor of Surgery

## Second MBBS

S. No	Paper	Hours Per Year					Evaluation (Marks)					
		Lecture Hours	SGT/Tutorials/Integrated learning/Practical	Clinical Postings	Self Directed Learning	Total	I A		University Exam			Total
							Theory	Practical	Theory	Practical	Orals	
1	Pathology	80	138	-	12	230	50	50	100 100	60	40	300
2	Pharmacology	80	138	-	12	230	50	50	100 100	60	40	300
3	Microbiology	70	110	-	10	190	50	50	100 100	60	40	300
4	Community Medicine	20	30	-	10	60	*	*	-	-	-	-
5	Forensic Medicine and Toxicology	15	30	-	5	50	*	*	-	-	-	-
6	Clinical Subjects	75	-	540	-	615	*	*	-	-	-	-
7	AETCOM (Attitude, Ethics & Communication Module)	-	29	-	8	37	-	-	-	-	-	-
8	Sports and Extracurricular Activities	-	-	-	25	25	-	-	-	-	-	-
	Total					1437						

## SCHEME OF EXAMINATION

## Bachelor of Medicine and Bachelor of Surgery

## Third MBBS- Part I

S. No	Paper	Hours Per Year				Evaluation (Marks)					
		Lecture Hours	SGT/Tutorials/Integrated learning/Practical	Self Directed Learning	Total	I A		University Exam			Total
						Theory	Practical	Theory	Practical/Clinicals	Orals	
1	Community Medicine - I	40	60	5	105	50	50	100	60	40	300
	Community Medicine - II							100			
2	Forensic Medicine and Toxicology	25	45	5	75	50	50	100	60	40	200
3	Ophthalmology	30	60	10	100	50	50	100	60	40	200
4	Otorhinolaryngology	25	40	5	70	50	50	100	60	40	200
5	General Medicine	25	35	5	65	*	*	-	-	-	-
6	General Surgery	25	35	5	65	*	*	-	-	-	-
7	OBG	25	35	5	65	*	*	-	-	-	-
8	Pediatrics	20	30	5	55	*	*	-	-	-	-
9	Orthopedics	15	20	5	40	*	*	-	-	-	-
10	Dermatology	20	5	5	30	*	*	-	-	-	-
11	Psychiatry	25	10	5	40	*	*	-	-	-	-
12	Respiratory Medicine	10	8	5	23	*	*	-	-	-	-
13	Radiodiagnosis and Radiotherapy	10	8	2	20	*	*	-	-	-	-
14	Anesthesiology	8	10	2	20	*	*	-	-	-	-
15	Clinical Postings*	-	-	-	759	*	*	-	-	-	-
16	(AETCOM)	-	19	06	25	-	-	-	-	-	-
	Total	303	401	66	1554						

**SCHEME OF EXAMINATION**

Bachelor of Medicine and Bachelor of Surgery

**Third MBBS- Part II**

S. No	Paper	Hours Per Year				Evaluation (Marks)					
		Lecture Hours	SGT/Tutorials/Integrated learning/Practical	Clinical Postings	Self Directed Learning	I A		University Exam			Total
						Theory	Practical	Theory	Practical	Orals	
1	General Medicine - I	70	125	15	210	50	50	100	60	40	300
	General Medicine - II							100			
2	General Surgery - I	70	125	15	210	50	50	100	60	40	300
	General Surgery - II							100			
4	OBG - I	70	125	15	210	50	50	100	60	40	300
	OBG - I							100			
6	Pediatrics	20	35	10	65	50	50	100	60	40	200
7	Orthopedics	20	25	5	50						
8	Clinical Postings				792						
9	Attitude, Ethics & Communication Module(AETCOM)	28		16	44						
10	Electives				200						
	Total	250	435	60	1781						

**ANNEXURE – I**

**DECLARATION**

I ..... Son of / Daughter of  
..... residing at  
..... and admitted to I year of Bachelor of  
Medicine and Bachelor of Surgery at Chettinad Hospital and Research Institute do hereby  
solemnly affirm and sincerely state as follows :

I declare that I shall abide by the rules and regulations prescribed by the Chettinad  
Academy of Research and Education, Kelambakkam for 'Bachelor of Medicine and Bachelor of  
Surgery Course' including regulations for re-admission after the break of study.

Date:

Signature of the candidate.

/ Countersigned /

(Office date seal)

/ Director

Dean / Principal



## Annexure – II

### Foundation Course (One Month)

Subjects / Contents	Teaching hours	Self directed learning (hours)	Total hours
Orientation 1	30	0	30
Skills Module2	35	0	35
Field visit to community health centre	8	0	8
Introduction to professional development & AETCOM module			
Sports and extracurricular activities	22	0	22
Enhancement of language / Computer skills3	50	0	50
	-	-	155

1. Orientation course will be completed as single block in the first week
- 2.. Based on perceived need to learners, one may choose language enhancement (English or local spoken or both) and computer skills. This should be provided longitudinally through the duration of the foundation course.
3. Teaching of foundation course will be organized by preclinical departments.

### First Phase teaching hours

Subjects	Lecture hours	Small group teaching / tutorials/Integrated learning / practical (hours)	Self directed learning (hours)	Total (hours)
Human anatomy	220	415	40	675
Physiology*	160	310	25	495
Biochemistry	80	150	20	250
Early clinical exposure**	90	-	0	90
Community Medicine	20	27	5	52
Attitude, Ethics & Communication module (AETCOM)***	-	26	8	34
Sports and extracurricular activities	-	-	8	34
Formative assessment and term examinations	-	-	-	60
Total	-	-	-	1736

\*Including Molecular biology

\*\* Early clinical exposure hours to be divided equally in all three subjects

\*\*\*AETCOM module shall be a longitudinal programme

### Second Phase teaching hours

Subjects	Lecture hours	Small group teaching/tutorials/integrated learning /practical (hours)	Clinical Postings (hours)	Self directed learning (hours)	Total (hours)
Pathology	80	138	-	12	230*
Pharmacology	80	138	-	12	230
Microbiology	70	110	-	10	190
Community Medicine	20	30	-	10	60
Forensic Medicine and Toxicology	15	30	-	5	50
Clinical Subjects	75**	-	540***		615
Attitude, Ethics & Communication module (AETCOM)***	-	29	-	8	37
Sports and extracurricular activities	-	-	-	25	25
Total	-	-	-	-	1440

\*At least 3 hours of clinical instruction each week must be allotted to training in clinical and procedural skill laboratories hours may be distributed weekly or as a block in each posting based on institutional logistics.

\*\*25 hours each for medicine surgery and gynecology & obstetrics

\*\*\* The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

### Third Phase part I teaching hours

Subjects	Lecture hours	Small group teaching/tutorials /integrated learning /practical (hours)	Self directed learning (hours)	Total (hours)
General Medicine	25	35	5	65
General Surgery	25	35	5	65
OBG	25	35	5	65
Pediatrics	20	30	5	55
Orthopedics	15	20	5	40
Forensic Medicine & Toxicology	25	45	5	75
Community Medicine	40	60	5	105
Dermatology	20	5	5	30

Psychiatry	25	10	5	40
Respiratory Medicine	10	8	5	23
Otorhinolaryngology	25	40	5	70
Ophthalmology	30	60	10	100
Radiodiagnosis and Radiotherapy	10	8	2	20
Anesthesiology	8	10	2	20
Clinical Postings*	-	-	-	759
Attitude, Ethics & Communication module (AETCOM)		19	06	25
Total	303	401	66	1554

\*The clinical postings in the third professional part 1 shall be 18 hours per week(3 hrs per day from Monday to Saturday)

#### Clinical Postings

Subjects	Period of training in weeks			Total Weeks
	II MBBS	III MBBS Part 1	III MBBS Part II	
<b>Electives</b>	-	-	8*(4 regular clinical posting)	4
General Medicine 1	4	4	8+4	20
General Surgery	4	4	8+4	20
OBG 2	4	4	8+4	20
Pediatrics	2	4	4	10
Community Medicine	4	6	-	10
Orthopedics – Including Trauma <sup>3</sup>	2	4	2	8
Otorhinolaryngology	4	4	-	8
Ophthalmology	4	4	-	8
Respiratory Medicine	2	-	-	2
Psychiatry	<b>2</b>	<b>2</b>	-	4
Radio diagnosis	<b>2</b>	-	-	2
Dermatology, Venereology & Leprosy	2	2	2	6
Dentistry & Anaesthesia	-	2	-	2
Casualty	36	42	48	126

\*In four of the eight weeks of electives, regular clinical postings shall be accommodated.

Clinical postings may be adjusted within the time frameworks

1this posting includes laboratory medicine (para-clinical) & infectious diseases (phase III part I).

2this includes maternity training and family welfare (including family planning)

3this posting includes physical medicine and rehabilitation

4this posting includes radiotherapy, wherever available.

Third Phase Part II teaching hours

Subjects	Lecture hours	Small group teaching/tutorials/Integrated learning / practical (hours)	Self directed learning (hours)	Total (hours)
General Medicine	70	125	15	210
General Surgery	70	125	15	210
OBG	70	125	15	210
Pediatrics	20	35	10	65
Orthopedics	20	25	5	50
Clinical Postings				792
Attitude, Ethics & Communication Module(AETCOM)	28		16	44
Electives				200
Total	250	435	60	1781

- 25% of allotted time of third professional shall be utilized for integrated learning with pre and para clinical subjects and shall be assessed during the clinical subjects examination.
- This allotted time will be utilized as integrated teaching by para clinical subjects with clinical subjects (as clinical pathology, clinical pharmacology and Clinical microbiology)
- the clinical postings in the third professional Part II shall be 18 hours per week (3 hrs. per day from Monday to Saturday)
- hours from clinical postings can also be used for AETCOM modules.

## Annexure – III

### Guidelines for University Examination:

Paper setting must follow MCI competencies in each subject. The accompanying syllabus is developed from the MCI competencies by respective departments. Question paper designing must take into consideration all levels of knowledge domain (as per Bloom's Taxonomy) and appropriate verbs must be used for the questions at each level to assess higher levels of learning.

I MBBS -Applied Questions for 20 marks shall be included in each paper

II MBBS

Pathology, Microbiology -Applied Questions for 20 marks shall be included in each paper

Pharmacology -One question shall be on clinical therapeutics in each paper

III MBBS

Ophthalmology, Oto-Rhino-Laryngology

Shall contain one question on preclinical and paraclinical aspects of 20 marks.

Medicine, Surgery, Obstetrics & Gynecology, Paediatrics (including Neonatology)

Shall contain one question on basic sciences and allied subjects in each paper.

### ANATOMY

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### University Examination Portions

Paper – I Topics 100 marks

Upper limb, Lower limb, Abdomen & Pelvis, General Embryology, Systemic Embryology (GIT, Genitourinary system), General Histology, Systemic Histology related to abdomen

Paper –II Topics 100 marks

Thorax, Head & Neck, Neuro Anatomy, Medical Genetics, General Anatomy, Systemic Embryology related to Thorax, Head & Neck & Brain, Systemic Histology related to Thorax, Head & Neck & Brain

### University Examination Pattern

There will be two papers in theory 100 marks each for 3 hours

Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination	100 marks
I.SPOTTERS	40marks
a) Gross anatomy	20 marks
b) Histology	20 marks
II. GROSS DISCUSSION	2x5
a) Paper I – 5 marks (Upper limb, Lower limb, Abdomen & pelvis)	10 marks
b) Paper II – 5 marks(Thorax, Head & Neck, Brain)	
III. OSPE	10marks
IV. VIVA	40 marks

**PHYSIOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

**University Examination Portions**

Paper – I Topics	100 marks
1. General Physiology	5. Excretory system (including skin)
2. Nerve-Muscle Physiology	6. Endocrine system
3. Blood	7. Reproductive system
4. Gastrointestinal system	

Paper –II Topics	100 marks
1. Cardiovascular system	3. Nervous system
2. Respiratory system	4. Physiology of the special senses

**University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours

Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination

100 marks

- I. Hematology - 30 marks
- II. Clinical Physiology - 30 marks
- III. Viva - 40 marks

## BIOCHEMISTRY

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### University Examination Portions

Paper – I Topics

100 marks

S.No	TOPICS	COMPETENCY NO
1	Basic biochemistry – cell and its subcellular components	BI 1.1
2	Enzymes	BI 2.1 to BI 2.7
3	Chemistry and metabolism of carbohydrates	BI 3.1 to BI 3.10
4	Chemistry and metabolism of lipids	BI 4.1 to BI 4.7
5	Nutrition	BI 8.1 to BI 8.5
6	Extracellular matrix	BI 9.1 to BI 9.3

Paper – II Topics

100 marks

S.No	TOPICS	COMPETENCY NO
1	Chemistry and metabolism of proteins	BI 5.1 to BI 5.5
2	Metabolism and homeostasis	BI 6.1 to BI 6.15
3	Molecular biology	BI 7.1 to BI 7.7
4	Oncogenesis and immunity	BI 10.1 to BI 10.5
5	Biochemistry laboratory equipments & techniques	BI 11.1 and BI 11.6

### University Examination Pattern

There will be two papers in theory 100 marks each for 3 hours

Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks  
Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks  
Short Notes - 4 X 5 = 20marks

Practical Examination

100 marks

<b>S.N O</b>	<b>EXERCISE</b>	<b>MARK DISTRIBUTION</b>	<b>MAXIMUM MARKS</b>
I.	Major experiments	1 X 25	25
II.	Minor experiments	1 X 15	15
III.	Spotter	5 X 2	10
IV.	Objective structured pattern examination (OSPE)	2 X 5	10
V.	Viva		40

## **MICROBIOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### **University Examination Portions**

Paper – I Topics -100 marks

Paper – II Topics -100 marks

Paper I

Paper II

- General Microbiology & Immunology (Module 1)
- CVS & Blood ( Module 2)
- GIT & Hepato Biliary System (Module 3)
- Musculoskeletal Skin & Soft tissue infections (Module 4)

- CNS Infections (Module 5)
- Respiratory Tract Infection (Module 6)
- Genito Urinary Infection & STD (Module 7)
- Zoonotic Disease & Miscellaneous (Module 8)

### **University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours



Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination

100 marks

Practical – 60 marks

- Spotters - 10 marks
- GramStain - 10 marks
- AFB Stain - 10 marks
- Case study - 10 marks
- OSPE - 20 marks

VIVA – 40 marks (Each module 5 marks)

**PHARMACOLOGY**

**Internal Assessment**

Total 100 marks

Theory	40 marks
Log Book	10 marks (added to theory)
Practical	40 marks
Record	10 marks (added to practical)

**University Examination Portions**

Paper – I Topics

100 marks

Pharmacology I - General pharmacology, Autonomic nervous system, Cardiovascular drugs, Drugs acting on kidney, Drugs affecting blood and blood formation, Drugs acting on Peripheral nervous system, Drugs acting on Central nervous system.

Paper – II Topics

100 marks

Pharmacology II – Autocoids and related drugs, Respiratory system drugs, Gastrointestinal drugs, Antimicrobial Drugs, Hormones and related drugs, Chemotherapy of neoplastic diseases, Miscellaneous drugs.

**University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours

Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination

100 marks

Practical I - 25 - Prescription writing - 10  
Prescription Audit - 5  
Clinical Problems  
solving exercises - 5  
Qualitative Chart - 5

Practical II - 25 - GP charts - 5  
Drug tray - 5  
Drug Interaction - 5  
Pharmacoeconomics - 5  
Spotters - 5

OSPE - 10 marks

VIVA - 40 marks

**PATHOLOGY**

**Internal Assessment** Total 100 marks

Theory 40 marks

Log Book 10 marks (added to theory)

Practical 40 marks

Record 10 marks (added to practical)

**University Examination Portions**

Paper – I Topics 100 marks

General Pathology and Hematology.

Paper – II Topics 100 marks

Systemic Pathology/ Clinical Pathology

**University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours

Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination

100 marks

Practical: 60 MARKS

Exercises	Marks
Spotters	10
Urinalysis (physical & abnormal constituents using reagent strips)	10
Differential Count & Interpretation of a given stained smear	10
Image quiz (histopathology & cytology)	18
Histogram, Bone marrow chart & Clinical pathology quiz / Haemoglobin Estimation/Blood Grouping/ OSPE	12

VIVA – 40 marks

### **FORENSIC MEDICINE & TOXICOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### **University Examination Portions**

Section B : General Forensic Medicine, Introduction to Forensic Medicine, Legal Procedure, Medical Law and Ethics, Identification, Medico-Legal Autopsy, Death and its Cause, Post-Mortem Changes, Mechanical Injuries, Regional Injuries, Medico-legal aspects of Wounds, Thermal Deaths, Starvation, Mechanical Asphyxia, , Anaesthetic and Operative Deaths, Impotence and Sterility, Virginity, Pregnancy and Delivery, Abortion, Sexual Offences, Infant Deaths, Blood Stains, Artefacts, Forensic Science Laboratory, Forensic Psychiatry

Section C: (Toxicology) General Considerations, Agricultural Poisons, Corrosive Poisons, Metallic Poisons, Inorganic Irritant Poisons, Organic Irritant Poisons, CNS Depressants,

Psychotropic Drugs, Deliriant Poisons, Drug Dependence and Abuse, Spinal Poisons, Cardiac Poisons, Asphyxiants, Miscellaneous Poisons, Food Poisoning

### **University Examination Pattern**

There will be one paper in theory of 100 marks for 3 hours

#### One paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination 100 marks

Practical: \_\_Total 60 Marks

1. Long Case: 30 Marks

2. Short Case: 20 Marks

3. Spotters /OSPE: 10 Marks

1. Practical – I: Long Case: 30 Marks, Time allotted: 1.30 hours

#### One of the following Exercises for Long Case

1. Age Estimation by Dental Examination
2. Age Estimation by Radiological Examination
3. Examination of a case of Drunkenness and issue of Drunkenness certificates.
4. Examination of a given cluster of bones and issue medico-legal certificate.
5. Examination of injuries and issue of wound certificate
6. Medical certificate of simulated poisoning
7. Medico-legal reports.

2. Practical – II: Short Case: 20 Marks, Time Allotted: 1.:30 hours

1. Foetal examination and Opinion
2. Viscera packing
3. Opinion of sexual offences
4. Sickness or Fitness Certificate
5. Issue: Negligence Certificate

3. Spotters: 5 Spotters x 2 Marks each = 10 Marks, Time Allotted: 10 minutes

VIVA – 40 marks

## **COMMUNITY MEDICINE**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### **University Examination Portions**

Paper – I Topics 100 marks

Man and Medicine, Concepts of health and disease , Epidemiology, Screening for Disease, Epidemiology of Communicable diseases- Respiratory infections, Intestinal infections, Arthropod borne infections, Viral zoonoses, Bacterial zoonoses, Zoonoses Rickettsial disease, Parasitic zoonoses, Surface infections, National Health Programs, Relationship of social and behavioural to health and disease, Basic statistics and its applications

Paper – II Topics 100 marks

Environmental Health problems, Principles of health promotion and education, Nutrition, Demography and vital statistics, Reproductive maternal and child health, Epidemiology of Non-communicable diseases , Risk factors in diseases, Control measures for Non-communicable diseases, Occupational Health, Geriatric services, Disaster Management, Hospital waste management, Mental health, Health planning and management, Health care of the community, International Health, Essential medicine, Recent advances in Community Medicine

### **University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours

#### Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical Examination 100 marks

Practical I : 30 marks

Clinical Social case discussion		20 marks
OSPE		10 marks
Practical II : 30 marks		
Epidemiological exercises	(2x10):	20 marks
Spotters & Specimen	(5x2) :	10 marks
VIVA		40 marks

## **OPHTHALMOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### **University Examination Pattern**

There will be one paper in theory of 100 marks for 3 hours

#### One paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical/Clinical Examination 100 marks

CLINICAL ..... 60 marks

1. Long Case 30 mts ... 30 marks

2. Two short cases 15 mts ... 20 marks

3. OSCE ... 10 marks

VIVA 40 marks

## **OTO-RHINO-LARYNGOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

## University Examination Pattern

There will be one paper in theory of 100 marks for 3 hours

### One paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Practical/Clinical Examination 100 marks

CLINICAL ..... 60 marks

1. Long Case 30 mts ... 30 marks

2. Two short cases 15 mts ... 20 marks

3. OSCE ... 10 marks

VIVA 40 marks

## MEDICINE

Internal Assessment	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

## University Examination Portions

Paper – I Topics 100 marks

Paper – II Topics 100 marks

## University Examination Pattern

There will be two papers in theory 100 marks each for 3 hours

### Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks  
Short Notes - 4 X 5 = 20marks

Practical/Clinical Examination		200 marks
CLINICAL		160 marks
Long Case	One	100
Short case	One	40
Spotters	5 marks 2 Spotter	10
OSCE		10
VIVA		40 marks

### **SURGERY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### **University Examination Portions**

Paper – I Topics 100 marks

General Surgery including Orthopaedics

Paper I -           Section A : General Surgery.  
                          Section B : Orthopaedics.

Paper – II Topics 100 marks

General Surgery including Anesthesiology, Dental Diseases and Radiology

Paper II -           Section A : General Surgery.  
                          Section B : Anaesthesiology, Dentistry & Radiology.

### **University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours

Each paper - 100marks

Section A - Multiple Choice Questions -20 X 1 = 20marks

Section B - Essay - 2 X 10 = 20marks

                  Short Notes - 4 X 5 = 20marks

Section C - Essay - 2 X 10 = 20marks



Short Notes - 4 X 5 = 20marks

Practical Examination		200 marks
CLINICAL		160 marks
Long Case	One	80
Short case	two (30 marks)	60
	(1 gen surgery + 1 ortho)	
Spotters	2 Spotter (5 marks)	10
OSCE		10
VIVA		40 marks

### **OBSTETRICS & GYNAECOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

### **University Examination Portions**

Paper – I Topics	100 marks
Paper – II Topics	100 marks

### **University Examination Pattern**

There will be two papers in theory 100 marks each for 3 hours

#### Each paper - 100marks

- Section A - Multiple Choice Questions -20 X 1 = 20marks
- Section B - Essay - 2 X 10 = 20marks  
Short Notes - 4 X 5 = 20marks
- Section C - Essay - 2 X 10 = 20marks  
Short Notes - 4 X 5 = 20marks

Practical/Clinical Examination		200 marks
CLINICAL		160 marks
Long Case - Obstetrics	One	80

Long Case - Gynecology     One                  80

VIVA    40 marks

**PAEDIATRICS INCLUDING NEONATOLOGY**

<b>Internal Assessment</b>	Total	100 marks
Theory	40 marks	
Log Book	10 marks (added to theory)	
Practical	40 marks	
Record	10 marks (added to practical)	

**University Examination Pattern**

There will be one paper in theory of 100 marks for 3 hours

One paper - 100marks

Section A -    Multiple Choice Questions -20 X 1 = 20marks

Section B -    Essay - 2 X 10 = 20marks

   Short Notes - 4 X 5 = 20marks

Section C -    Essay - 2 X 10 = 20marks

   Short Notes - 4 X 5 = 20marks

Practical/Clinical Examination    100 marks

CLINICAL ..... 60 marks

1. Long Case 30 mts    ... 30 marks

2. Short cases 15 mts    ... 15 marks

3. Spotters 20 mts    ... 15 marks

VIVA    40 marks