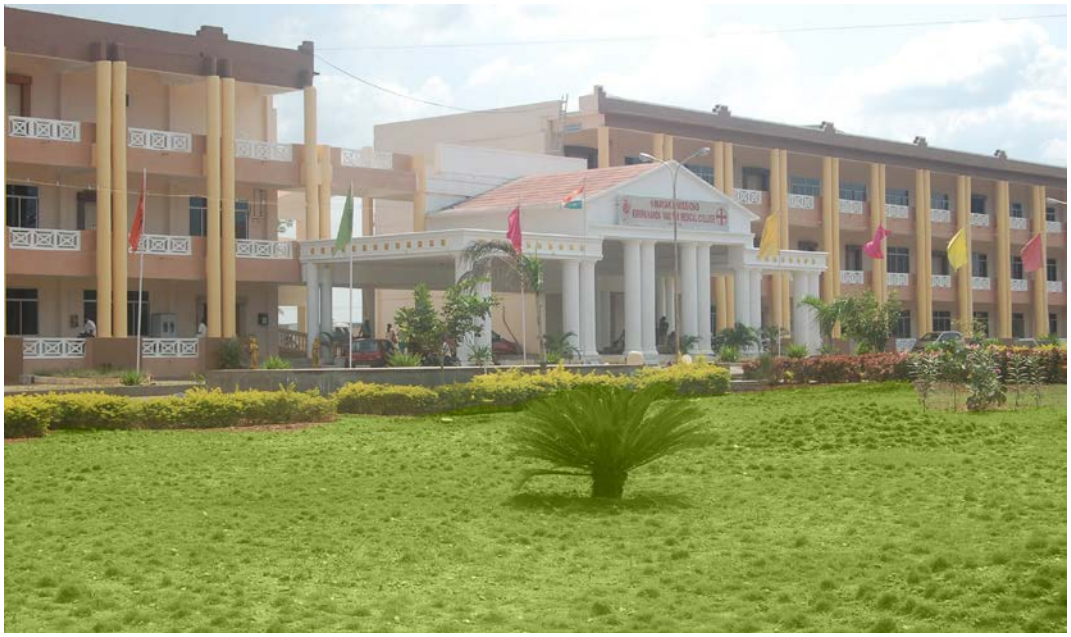
VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University under section 3 of the UGC Act 1956)

VINAYAKA MISSION'S KIRUPANANDA VARIYAR MEDICAL COLLEGE & HOSPITALS

VINAYAKA MISSION'S KIRUPANANDA VARIYAR MEDICAL COLLEGE & HOSPITALS,

SALEM - 636308.

Constituent Unit of Vinayaka Mission's Research Foundation
(Deemed to be University)



Academic Calendar 2020 - 2021

Phase II – II MBBS

Syllabus, Curriculum & Teaching Schedule

Website : www.vmkvmc.edu.in

HISTORY OF THE COLLEGE

Vinayaka Mission's Kirupananda Variyar Medical College is located in Salem, Tamilnadu and strives for achieving academic excellence. It was started in the year 1995-96, and was affiliated to the Tamilnadu Dr. MGR Medical University. In 2005-06 it became a constituent unit of Vinayaka Mission's Research Foundation (Deemed to be University) (VMRF-DU), Salem, Tamilnadu. Eligible students are admitted by counseling after NEET examination.

The Institution has a limpid vision of providing service to the humanity at large, by making available, the best form of health care possible in the world to the local community.

FACILITIES

The unitary campus houses a teaching hospital and hostels with adequate space for future expansion.

INFRASTRUCTURE : The infrastructure is adequate and is designed to create a learning atmosphere. All the departments specified under the MCI are available as per norms. They are spacious and well furnished. Information Communication Technology (ICT) enabled air-conditioned lecture halls with the necessary equipments and latest teaching aids are available. The pre and para-clinical departments have updated laboratories which periodically undertake Internal and External Quality Assurance evaluations.

The campus houses separate blocks for the college, hospitals and hostels. College blocks accommodate pre & para-clinical departments with Gallery type A/C lecture halls with audiovisual aids like LCD, OHP, etc., and well equipped labs, seminar halls & demonstration rooms in each department.

PRECLINICAL DEPARTMENTS	**PARA-CLINICAL DEPARTMENTS**
Anatomy	Pathology
Physiology	Microbiology
Biochemistry	Pharmacology

HOSPITAL

The **650** bedded hospital with world class facilities with all innovative and sophisticated state-of-the-art equipment and technology is available. Highly qualified and experienced health personnel manage the hospital.

The student is tuned to gain indepth knowledge in medical subjects through the use of appropriate and innovative participatory teaching techniques using the latest tools and inputs.

CLINICAL DEPARTMENTS

General Surgery	General Medicine
Orthopaedics	Paediatrics
Ophthalmology	Chest & TB
ENT	Skin & STD
Obstetrics & Gynaecology	Psychiatry
Anaesthesia	Radiology
Community Medicine	Emergency Medicine
Forensic Medicine	

SUPER-SPECIALTY DEPARTMENTS

Cardiothoracic Surgery	Cardiology
Neurosurgery	Neurology
Surgical Oncology	Urology
Paediatric Surgery	Nephrology
Plastic Surgery	Neonatology
	Oncology

OTHER FACILITIES

- A/C auditorium with a seating capacity of 750
- Separate common rooms for boys & girls.
- Printing, Scanning & Photocopying facilities are available in the library. Question bank is also available.
- There are play grounds in the campus for hockey, foot-ball, volley-ball, cricket, badminton, throw ball, tennikoit and running track. Indoor games facility for TT & carrom are available. Gym facilities are available for the students.
- The campus is WiFi enabled.
- **2** cafeterias are available in the campus which provide the students with tasty & hygienic multicuisine food (Indian, Chinese etc.).
- A stationery and novelty store in the hospital and in hostel premises provide all the necessary items to students and staff.

LIBRARY: An upgraded library with the latest collections of books and journals in addition to internet facilities is available.

Central library with 7000 titles is open from 8 am to 12 midnight. Separate reference, journals and Internet sections are present & easily accessible to Students & faculty.

MENTORSHIP: Well qualified and dedicated faculty, facilitate learning and address the issues of students through a Mentorship Programme. Innovative evaluation methods including formative and summative evaluation address the components of student assessment in a transparent manner.

RESEARCH: The Institution provides a good research ambience for conduct of research studies and quality health surveys. National (ICMR) and International (WHO) collaborative studies are conducted by the faculty members as well as a few medical students. The faculty and students are deputed frequently to Scientific Conferences and Workshops.

POSTGRADUATE PROGRAMMES in Ophthalmology, ENT, General Medicine, Psychiatry, Radiology, Skin and STD, Paediatrics, General Surgery, Orthopedics, Anaesthesiology, Obstetrics and Gynaecology, Emergency Medicine, Transfusion Medicine, Microbiology, Pharmacology, Biochemistry, Physiology, and Anatomy are being conducted.

EXTRACURRICULAR ACTIVITIES: Facilities are also available for extra curricular activities (play grounds, basket ball courts, sports kits for both outdoor and indoor games and well equipped gymnasium).

STUDENT SUPPORT PROGRAMMES like Seminars, Symposia, CME, Small Group Teaching, Mentorship and Counseling are provided. The Alumni Association of the Institution is strong and helps the students to upgrade their knowledge with scientific updates. Meritorious students get recognition in the form of awards and medals.

SPORTS & GAMES: Intramural, intercollegiate and interuniversity programs provide an opportunity for physical fitness.

The Vinayaka Missions Institutions having reached the path of academic excellence will continue to strive for global sustenance.

PLEDGE

We, the students of Vinayaka Mission's Kirupananda Variyar Medical College, Salem [Vinayaka Mission's Research Foundation (Deemed to be University)] pledge that

- I, _____ (name), being admitted to the study of medicine – the art of healing, shall dedicate myself totally to uphold and contribute productively to the nobility of the profession.
- I shall use my education & knowledge to acquire the ability to look into the present and future health needs of our country as well as that of the world.
- I shall strengthen the core values of our national ethos, healthy living, liberty, unity in diversity; truth and common good in all my endeavours.
- I shall treat my parents, peers, teachers and elders with great respect.
- I shall show empathy and concern to the sick & patients and dotards & down trodden people.
- I shall consider all men as equal and "the plurality and multi-ethnicity" woven India's secular fabric, shall become my "preferred priority" while interacting with others.
- I shall remember the great leaders of our nation, abide by their teaching and steadfastly work hard towards our Mission's objectives to build a stronger nation through medical education.

STUDENT CLINICIAN OATH

1. I …… II year MBBS student clinician of the revered college – Vinayaka Mission's Kirupananda Variyar Medical College & Hospitals, Salem, stand to affirm commitment to the oath I take today.

2. I firmly believe that the learning of medicine under the guidance of my teachers is going to shape my future destiny and career.

3. My learning and skill acquisition during my student clinician period will be focus driven and for a defined purpose.

4. During the discharge of my duties as a student clinician today and a qualified Physician tomorrow, I shall work with the healthcare team with trust, compassion, loyalty, care and kindness.

5. I shall as a student-clinician learn and practice medical care with highest qualities of morality; legality & ethical principles in a wise manner, without deviating from it.

6. I shall update myself with the latest knowledge and skills to practice medicine with sincerity and perfection.

7. I shall vow to be an effective & active member of healthcare team and offer my services during natural calamities and national duties.

8. I shall undertake responsibilities and shall not consider color; caste, race or religion while treating the fellow human being.

9. I shall as a student clinician venerate my professional elders, imbibe their experience and skills and strive to work with discipline, dedication and hardwork and bring glory to my institution.

10. I shall respect the valuable traditions and heritage of my country and live as a worthy citizen and make my family and country proud and cherish the beauty of unity of our nation.

11. I shall explore new frontiers, be innovative, use technology judiciously and focus on high quality research.

12. I shall have great concern on Green initiatives. I shall carry my fight against social evils and be a part of environmental protection groups.

THE COLLEGE ANTHEM

Vinayaka thy name is the glory
Vinayaka thy saga divine
Vinayaka a star in the sky
A ray of hope through troubled times

Vinayaka thy legacy unfathomed
Vinayaka thy medicos shine
Vinayakans they'll be there through turbid times
Duty to them is blessing divine

Vinayakans have the heart of the winner
They stand united together as one
They are the winners under the sun
Winners under the sun

RULES AND REGULATIONS OF THE COLLEGE

I. GENERAL :

a) All students must wear a clean, doctor's white overcoat with half sleeve & identity card in the premises of the College & Hospital.

b) No meeting or demonstration should be held in the premises of College / Hospital and Hostels.

c) Ragging in any form is strictly forbidden within or outside the College and Hospital premises.

d) Students are forbidden to take part in Political Agitations, Strikes and Demonstrations.

e) Students are required to observe discipline at all times in the college and not to make any noise when they go from one class room to another class room.

f) Students must be punctual to lecture classes & practicals / hospital clinics.

II. COLLEGE RULES :

a. **ATTENDANCE:** Students should be punctual to the hospital and college and should have a minimum attendance of 75% in theory and 80% in practical in each subject to appear for University Examination. Students who lack the minimum prescribed attendance in any one subject will not be permitted to write the examination. However, the Vice-Chancellor has the discretionary power to allow a condonation of shortage of attendance upto a maximum of 10% in the prescribed minimum attendance for admission to an examination. A candidate lacking in attendance should submit an application in the prescribed form, endorsed by the Head of the Department / the Head of the Institution to the Vice Chancellor for approval for admission to the examination. Every student must have cleared all the arrears of fees in Hostel and College and must get a "No Due" certificate from the warden and Deputy Dean before submitting the application for University Examination.

b. **LEAVE :** Students should avail leave only with the previous sanction of the Head of the Department. When leave is availed for unforeseen causes the application must be made soon after availing the leave. Leave letter on medical grounds should always accompany a medical

certificate by a medical officer. The copy of the leave letter will be sent to the parent for endorsement if needed.

c. **DAMAGES:** Students should pay for any breakage / loss in the laboratories.
d. **FEES :** The Examination application of students will not be forwarded to the University if they have any dues regard to Tuition Fees, Special Fees and Hostel Fees or any other arrears.
e. **EXAMS :** In each department 3 Internal Assessment examinations will be conducted out of which the best of 2 Internal Assessment marks will be considered for University Examinations.
f. **RECORDS :** Practical record note books should be completed & submitted in time.
g. **CELL PHONE** usage is prohibited during class hours (theory/practicals). If cell phones were to be found being used during class hours, they would be confiscated.

III. DRESS CODE :

1. Formal wear for both girls and boys.
2. Girls should tie their hair up & wear cut shoes; avoid bracelets, finger rings, anklets & flowers.
3. Nails should be trimmed & not painted.
4. Boys should wear formal clothes (avoid fluorescent and flashy colored pants/ Jeans/Shorts/T-shirts) with black or brown shoes. Hair should be trimmed & boys should be clean shaven (face).
5. Half sleeved white coat should be worn inside the college campus.

IV. ANTI RAGGING REGULATIONS :

INTRODUCTION

This Regulation has been brought forth by the University Grants Commission in consultation with the Councils to prohibit, prevent and eliminate the scourge of ragging.

UGC REGULATIONS ON CURBING THE MENACE OF RAGGING IN HIGHER EDUCATIONAL INSTITUTIONS, 2009.
(under Section 26 (1)(g) of the University Grants Commission Act, 1956)

OBJECTIVES

To eliminate the Attitude of Ragging, the following understanding of the term “Ragging” is of prime importance. Ragging is inclusive of any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student or indulging in rowdy or indisciplined activities by any student or students which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in any fresher or any other student or asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame or torment or embarrassment so as to adversely affect the physique or psyche of such fresher or any other student, with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student, in all higher education institutions in the country and thereby, to provide for the healthy development, physically and psychologically, of all students.

WHAT CONSTITUTES RAGGING

Ragging constitutes one or more of any of the following acts carried out in any area inside or outside the College Campus.

A. Any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student;

B. Indulging in rowdy or indiscipline activities by any student or students which causes or is likely to cause annoyance, hardship, physical or psychological harm or to raise fear or apprehension thereof in any fresher or any other student;

C. Asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame, or torment or embarrassment so as to adversely affect the physique or psyche of such fresher or any other student;

D. Any act by a senior student that prevents, disrupts or disturbs the regular academic activity of any other student or a fresher;

E. Exploiting the services of a fresher or any other student for completing the academic tasks assigned to an individual or a group of students.

F. Any act of financial extortion or forceful expenditure burden put on a fresher or any other student by students;

G. Any act of physical abuse including all variants of it: sexual abuse, homosexual assaults, stripping, forcing obscene and lewd acts, gestures, causing bodily harm or any other danger to health or person;

H. Any act or abuse by spoken words, emails, post, public insults which would also include deriving perverted pleasure, vicarious or sadistic thrill from actively or passively participating in the discomfiture to fresher or any other student ;

I. Any act that affects the mental health and self-confidence of a fresher or any other student with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student.

ADMINISTRATIVE ACTION IN THE EVENT OF RAGGING

Anyone found guilty of ragging and/or abetting ragging, whether actively or passively, or being a part of a conspiracy to promote ragging, is liable to be punished in accordance with these Regulations as well as under the provisions of any penal law for the time being in force.

The institution shall punish a student found guilty of ragging after following the procedure and in the manner prescribed herein under:

A. The Anti-Ragging Committee of the institution shall take an appropriate decision, in regard to punishment or otherwise, depending on the facts of each incident of ragging and nature and gravity of the incident of ragging established in the recommendations of the Anti-Ragging Squad.

B. The Anti-Ragging Committee may, depending on the nature and gravity of the guilt established by the Anti-Ragging Squad, award, to those found guilty, one or more of the following punishments :-

    i. Suspension from attending classes and academic privileges.

ii. Withholding/ withdrawing scholarship/ fellowship and other benefits.
iii. Debarring from appearing in any test/ examination or other evaluation process.
iv. Withholding results.
v. Debarring from representing the institution in any regional, national or international meet, tournament, youth festival, etc.
vi. Suspension/ expulsion from the hostel.
vii. Cancellation of admission.
viii. Rustication from the institution for period ranging from one to four semesters.
ix. Expulsion from the institution and consequent debarring from admission to any other institution for a specified period.

Mobile inspection squads have been formed to carry out surprise checks in hostels and transport.

Website: https://antiragging.in

LIBRARY RULES & REGULATIONS

1. Working Hours:

a. The library is kept open from **8.00** a.m. to 12 midnight on all working days.

2. Membership:

1. The Library is open to all students and members of the staff of the college and hospitals.

2. Outsiders and students who have left the college, dismissed or under suspension cannot have the privilege of using the library except with the special permission of the Dean.

3. Issue and Return of books:

No student will be allowed to take books or journals outside the library.

4. Dos & Don'ts:

1. Students must use only the allotted space for studying
2. Strict silence must be maintained inside the library
3. Students wishing to use the computer terminals should obtain permission of the librarian. Use of computers must be for academic purpose only and not for entertainment.

5. Photocopier Facility:

Students can use the photocopying facility for the required academic materials after permission and payment to the Librarian.

6. Mobile phones:

Use of mobile phones in the library is not permitted.

Vinayaka Mission's Research Foundation (Deemed to be University)

Administrators

- **CHANCELLOR** : Dr. A.S. Ganesan
- **PRO-CHANCELLOR** : Dato' Sri. Dr. S. Sharavanan
- **VICE PRESIDENTS** : Mr. J. S. Sathish Kumar
  Mr. N. V. Chandrasekar
- **DIRECTORS** : Mr. K. Jaganathan
  Mr. N. Ramaswamy
- **VICE CHANCELLOR** : Prof. Dr. P.K. Sudhir
- **PRO-VICE CHANCELLOR** : Prof. Dr. P.S. Manoharan
- **REGISTRAR** : Prof. Dr. B. Jaykar
- **DIRECTOR (ACADEMICS)** : Prof. Dr. J. Sabarinathan
- **CONTROLLER OF EXAMINATIONS** : Dr. C.L. Prabhavathi
- **DIRECTOR (STUDENTS WELFARE)** : Prof. Dr. R.S. Shanmuga Sundaram

Hospital & College Administrators

➢ **DEAN**	:	Prof. Dr. Milind V. Bhutkar, M.D., MNAMS,
➢ **MEDICAL SUPERINTENDENT**	:	Prof. Dr. G. Kannan, M.D.,
➢ **DIRECTOR, HOSPITAL DEVELOPMENT COMMITTEE**	:	Prof. Dr. K. Ezhil Vendhan, M.S.,
➢ **DEPUTY DEAN**	:	Prof. Dr. Deepti Shastri, M.S., MNAMS,
➢ **DEPUTY MEDICAL SUPERINTENDENT**	:	Prof. Dr. E.M.J. Karthikeyan, M.S.,
➢ **DEPUTY MEDICAL SUPERINTENDENT**	:	Prof. Dr. S. Senthil Priya, M.D.,
➢ **LIBRARIAN**	:	Mr. R. Kathirvel, MSc., MLIS, MPhil, PhD.,
➢ **DEPUTY WARDEN (MALE)**	:	Mr. S. Syed Liyakath Ali, M.Sc.(Med. Phy)
➢ **DEPUTY WARDEN (FEMALE)**	:	Dr. Reena Rajan, MSc., (Med Micro), Ph.D.,

Vinayaka Mission's Kirupananda Variyar Medical College & Hospitals,
Seeragapadi, Salem - 636308.

VINAYAKA MISSION'S RESEARCH FOUNDATION (Deemed to be University)

ANTI –RAGGING COMMITTEE

Academic year 2020-2021

S.No	Name	Designation	Mobile No	E-Mail
1.	**Chairperson**			
	Dr. Milind V. Bhutkar	DEAN	9443227878	dean.vmkvmc@vmu.edu.in
2.	**Members**			
	Mr. Rajini Kanth	Civil (Advocate)	9360838477	-
3.	**Police Administration (SP / Inspector)**			
	Mr. Uma Shankar, IPS	Rural DSP	9498167667	-
	Mr. Kulasekaran	Rural – Inspector of Police	9498167900	-
	Mr. Thangavelu	Sub - Inspector of Police (Attayampatti)	9498171885	-
4.	Mr. Senthil	Local Media	9498100980	-
5.	**Non –Govt Organization**			
	Mr. Yuvaraj	Blessing Youth Mission	9943756835	yuvaraj.bym@gmail.com
	Mrs. Devika	Bharathiyar Malaival Makkal Nalvalvu Sangam	9787088088	devikafaith@gmail.com
6	**Representative of Faculties**			
	Dr. G. Kannan	Convenor, Medical Superintendent	9843337407	drkannang@yahoo.com
	Dr. Deepti Shastri	Deputy Dean Professor, Dept. of Anatomy	9842724197	deepthirahul@yahoo.co.in
	Dr. K. Ezhil Vendhan	Director, Hospital Development Committee Prof.& HOD, Dept of Ophthalmology	9360838468	hospitaleye@gmail.com
	Dr. J. Sridhar	Prof .& HOD, Dept of Surgery	9843096700	drsridhar2002@yahoo.com
7	**Youth activities (Red Cross, NSS & Red Ribbon Club)**			
	Dr.S.Rajaram	Professor, Dept of Pharmacology & Red Cross-co-ordinator	9443086300	drrjrm@gmail.com
	Dr. R. Shankar	Professor of Community Medicine & Red Ribbon Club	9655368498	shnkr_radhakrishnan@yahoo.com
	Dr. Gowri Sankar R.	Asso. Professor of Pathology & NSS-co-ordinator	9894957670	gowrishines@gmail.com

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	Dr. Senthil Priya S.	Academic Co-ordinator, Final MBBS Part II & Professor, Dept of Obs. & Gyn.	8300142244	senthilpriya2000@gmail.com
	Dr. Reena Rajan	Deputy Warden, Girls Hostel	9894990961	reenarajan83@gmail.com
	Mr. S. Syed Liyakath Ali	Deputy Warden Boys Hostel	9944813369	s.syedliyakathali@gmail.com
8	**Representative of parents (I MBBS)**			
	Dr. Pugalagiri		9843053736	drpugal@vadamalayan.org
9	**Representative of Freshers**			
	Mr. Nithin T.	I MBBS (2020 – 2021)	8072147447	nithintamilselvan19@gmail.com
	Ms. Prithi Nivethitha	I MBBS (2020 – 2021)	8296287562	prithinivethitha@gmail.com
10	**Representative of Students (Senior)**			
	Priyadarshini Inkarsal	I MBBS (2019 – 2020)	8291227388	inkarsal.p@gmail.com
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	Charan Sankar S.	CRRI	8344672196	charansankar97@gmaiil.com
	Keerthana K.	CRRI	8754837700	keerthanakumar03@gmail.com
11	**Non-teaching Staff**			
	Mr. K. Arun Kumar	Chief Computer Programmer	9443848613	karunhari@gmail.com
	Mr. P. Dhanasekaran	Office Superintendent	9942406667	-

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Kirupananda Variyar Medical College & Hospitals,
Seeragapadi, Salem - 636308.

VINAYAKA MISSION'S RESEARCH FOUNDATION
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ANTI –RAGGING SQUAD (2020 – 2021)

S. No.	Name	Designation	Mobile No	E-Mail
1	Dr. Milind V. Bhutkar	Dean	7639552776	dean.vmkvmc@vmu.edu.in
2	Dr. G. Kannan	Medical Superintendent	9843337407	drkannang@yahoo.com
3	Dr. K. Ezhil Vendhan	Director, Hospital Development Committee	9360838468	hospitaleye@gmail.com
4	Dr. Deepti Shastri	Deputy Dean Professor, Dept of Anatomy	9842724197	deepthirahul@yahoo.co.in
5	Dr. Karthikeyan E.M.J.	Deputy Medical Superintendent Professor, Dept of Surgery	9842256564	emjkarthik@yahoo.co.in
6	Dr. S. Senthil Priya	Deputy Medical Superintendent Professor, Dept of Obs. & Gyn.	8300142244	senthilpriya2000@gmail.com
7	Dr. E. Manivannan	Prof. & HOD, Dept. of Pharmacology	9790644978	manipoo73@gmail.com
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12	Dr. Preethi S..	ARMO	9500245900	preethi201010@gmail.com
13	Mr. S. Syed Liyakath Ali	Deputy Warden – Boys hostel	9944813369	s.syedliyakathali@gmail.com

14	Dr. Sheerin Fathima	Deputy Warden – Girls Hostel	9486170816	dr.assf@gmail.com
15	Dr. Nirmal Sujitha I.J.	Deputy Warden – VIPQ Girls Hostel	8220393525	nsuji.ij@gmail.com
16	Dr. Harshavarthanan.V	Deputy Warden – VIPQ Gents Hostel	8220067690	vharshav215@gmail.com
17	Dr. Reena Rajan	Deputy Warden – Kirupa Girls hostel	9894990961	reenarajan83@gmail.com
18		Assistant Warden Boys hostel		
19	Ms. Geetha	Assistant Warden – Girls hostel	9019428773	

VINAYAKA MISSION'S
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MEDICAL COLLEGE & HOSPITALS

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VINAYAKA MISSION'S RESEARCH FOUNDATION

(Deemed to be University)

Date : 13.03.2021

Internal Complaints Committee 2020-2021

1.	Dr. V. Sivasankari, Professor, Dept. of Pharmacology	Presiding Officer & Convener	9443515035 drvsivasankari@gmail.com
2.	Dr. S. Senthil Priya, Professor, Dept. of Obs. & Gyn.	Faculty	8300142244 senthilpriya2000@gmail.com
3.	Dr. E.M.J. Karthikeyan, Professor, Dept. of General Surgery	Faculty	9842256564 emjkarthik@yahoo.co.in
4.	Mr. P. Dhanasekaran Office Superintendent	Member	9942406667
5.	Mrs. S. Sudha Attender	Member	9688906311
6.	Samyuktha B.S. UG Student	Final year MBBS	samsaro2322@gmail.com 8220652520
7.	Dr. Jenny. V Paediatrics - PG Student	Member	9944733840 jennyvk29494@gmail.com
8.	Mrs. Pratima M. Bhutkar Ph.D. Scholar	Member	8903351576 pratimab13@rediffmail.com
9.	Mrs. Ruby Thiyagarajan	NGO Representative	9894999574 ywcasalem@rediffmail.com ywcasalem7@gmail.com

MEDICAL EDUCATION UNIT CONSTITUTION

Sr. No	Name	Designation & Department	Mobile	E-mail
1	Dr. Milind V. Bhutkar	Dean & Professor, Department of Physiology (Officer In-charge)	7639552776	dr_mvbhutkar@rediffmail.com
2.	Dr. K.C. Shanthi	MEU Coordinator & Professor & Head, Department of Anatomy	9443370319	shanshan1718@gmail.com
3.	Dr. Deepti Shastri	Deputy Dean and Professor, Department of Anatomy	9842724197	deeptishastrimukherjee@gmail.com
4.	Dr. C.Rajasekaran	Professor, Department of General Surgery	9443221656	drcraja@gmail.com
5.	Dr. S. Rajaram	Professor, Department of Pharmacology	9443086300	drrjrm@gmail.com
6.	Dr. R. Thamilselvi	Professor & Head, Department of Pathology	9842744313	drselvipatho@yahoo.com
7.	Dr. R. Shanmugasundaram	Professor, Department of General Medicine (Medicine & allied disciplines)	9043855853	drsambu123@yahoo.in drsambu123@gmail.com
8.	Dr. Karthikeyan E.M.J.	Professor, Department of General Surgery (Surgery & allied disciplines)	9842256564	emjkarthik@yahoo.co.in emjkarthik@gmail.com
9.	Dr. V. Suganthi	Professor & Head, Department of Physiology	9443908855, 8825422128	vsuganthiarasan@gmail.com
10.	Dr. E. Manivannan	Professor & Head, Department of Pharmacology	9790644978	manipoo73@gmail.com

COURSE DESCRIPTION

Every MBBS student shall undergo a period of certified study extending over 4½ academic years followed by one year of compulsory Rotatory internship.
The period of 4½ years is divided into three phases as follows:

I.1. Phase I (I MBBS):

1. Phase I (I MBBS) (One year) consisting of Preclinical subjects (Human Anatomy, Physiology, Bio-Chemistry) & introduction to Community Medicine including humanities.

I.2. Phase II (II MBBS):

Phase II (II MBBS) (One year) consisting of Para-clinical / Clinical subjects.

During this phase teaching of Para-clinical and Clinical subjects shall be done concurrently.

The Para-clinical subjects shall consist of Pathology, Pharmacology, Microbiology, Forensic Medicine including Toxicology and part of Community Medicine.

The clinical subjects shall consist of all those detailed below in Phase III.

I.3. Phase III (III MBBS):

During Phase III of the M.B.B.S. course the clinical subjects of Medicine, Pediatrics, Surgery, Ophthalmology, Otorhinolaryngology and Obstetrics and Gynaecology are taught besides Community Medicine.

Part I: At the end of Phase III Part I, the candidate shall be examined in four subjects namely Forensic Medicine, Ophthalmology, Otorhinolaryngology and Community Medicine.

Part II: At the end of Phase III Part II, the candidate shall be examined in four subjects namely Medicine, Surgery, Obstetrics and Gynaecology and Pediatrics.

I. MBBS Phase Wise Time Distribution & Examination Schedule

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
2020	------	----------	------	-----	------	------	------	------	-----	-----	------	------
2021	------	I MBBS										
2022	Exam	II MBBS										Exam
2023	III MBBS Part I											Exam
2024	III MBBS Part II											
2025		Exam/PG NExT?	CRRI									
2026			Univ. NExT?				Start of PG course, Time not yet fixed					

II . Record Note books:

Every student must maintain a record of the Practical / Clinical work assigned to him in the record note books.

Students should also maintained log books for :

1. Academic activities
2. AETCOM

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.

At the time of Practical / Clinical examination each candidate shall submit to the Examiner his / her Clinical / Laboratory note books duly certified by the Head of the department as a bonafide record of the work done by the candidate.

In respect of failed candidates the marks awarded for records at the first attempt may be carried over to the next examination attempt. If a candidate desires he/she may be permitted to improve on the performance by submission of fresh record note books.

Integration: Each of the departments shall provide integrated teaching with pre-clinical, para-clinical and clinical departments to expose the students to the full range of disciplines relevant to each area of study. Problem Based Learning (PBL) shall be emphasized.

III. Internal Assessment:

a. A minimum of three written examinations shall be conducted in each subject during an academic year and the average marks of the Two best performances shall be taken into consideration for the award of internal assessment marks. Assignments completed by candidates as home work or vacation work may also be considered.
b. A minimum of three Practical / Clinical examinations shall be conducted in each subject during an academic year and the average marks of the two best performances shall be taken into consideration for the award of internal assessment marks. Mark awarded for maintenance of records & log books should be included in the internal assessment of practical / clinical performance.
c. A failed candidate in any subject shall be provided an opportunity to improve his / her internal assessment marks by conducting retests in theory and practical separately and the average shall be considered for improvement.
d. The internal assessment marks awarded both in Written and Practical / Clinical separately shall be submitted to the University endorsed by the Head of the institution atleast fifteen days prior to the commencement of the theory examinations.
e. A candidate should obtain a Minimum of 50 % of marks in internal assessment in a subject to be permitted to appear for the University examination in that subject. For this purpose the candidate has to obtain 40 % of marks in Theory and Practical / Clinical separately.

IV. Competitive Prize Exams:

Students who pass all the internal assessment examinations with more than 60% marks are eligible to appear for competitive prize exams in the subjects concerned conducted by the respective departments.

V. High achievers in each subject are encouraged and trained to participate in scientific conferences, dissertation competitions and quizzes.

VI. University Examinations

1. University exam marking pattern

Phase of Course	Written – Theory Total	Practicals / Orals / Clinicals	Pass Criteria
First Professional			**Internal Assessment** 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations **University Examination** Mandatory 50% marks in theory and practical (practical =Practical/Clinical +Viva)(theory =theory paper(s) only) Internal assessment marks are not to be added to marks of the University examinations and should be shown separately in the grade card.
Human Anatomy – 2 papers	200	100	
Physiology- 2 papers	200	100	
Biochemistry – 2 papers	200	100	
Second Professional			
Pharmacology- 2 papers	200	100	
Pathology – 2 papers	200	100	
Microbiology – 2 papers	200	100	
Third Professional Part –I			
Forensic Medicine & Toxicology – 1 paper	100	100	
Ophthalmology -1 paper	100	100	
Otorhinolaryngology – 1 paper	100	100	
Community Medicine – 2 papers	200	100	
Third Professional Part –II			
General Medicine – 2 papers	200	200	
General Surgery – 2 papers	200	200	
Pediatrics – 1 paper	100	100	
Obstetrics & Gynaecology -2 papers	200	200	

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:**
   1. Passing in First MBBS Professional examination is compulsory before proceeding to Phase II training.
   2. A student who fails in the II MBBS Professional examination shall be permitted to carry the failed subjects to Phase III of the MBBS course but shall not be allowed to appear in III MBBS Professional Part I examination unless he/she passes all the subjects of the II MBBS Professional examination. Passing in II MBBS Professional examination is compulsory before entering Part II of Phase III (final year) of the course.

3. Passing in III MBBS Professional (Part I) examination is not compulsory before entering for Part II training; however passing of III MBBS Professional (Part I) is compulsory for being eligible to appear for III-MBBS Professional (Part II) examination.

4. Classification of successful candidates

a. 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 that subject with distinction.

b. First class may be awarded to such candidates who have passed all the subjects at the first appearance and obtained 60 % of marks and above in the aggregate of all the subjects he/she had appeared in the particular phase of the MBBS course.

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 successful candidates shall be declared to have passed in second class.

5. Attendance required for Admission to Examination:

a. No candidate shall be permitted to any one of the parts of MBBS Examinations unless he / she has attended the course in the subject for the prescribed period in an affiliated 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 attendance of 75% in theory and 80% in practical in each subject before admission to the examination.

c. A candidate lacking in the prescribed attendance and progress in any one subject in the first appearance shall be denied admission to the entire examinations.

d. Failed candidates who are not promoted to the next phase of study are required to put in minimum attendance of 75% in theory and 80% in practical during the extended period of study before appearing for the next examination.

VII. Awards:

a) Certificates of Merit are awarded to the students securing the overall highest marks in all the internal assessment exams.

b) Prizes are awarded to students scoring the highest marks in the competitive prize exams conducted by various departments.

c) Proficiency certificates are awarded to the students securing the highest marks in each subject in the University examinations.

d) The student securing the highest overall marks throughout the course of MBBS study (regular students) in the University exams - institution as well as university ranking, is presented with the Dr. A. Shanmugasundaram - The Founder Chancellor, VMRF(DU)'s, Gold Medal for the BEST OUTGOING STUDENT award.

VIII. Working Days:

Each academic year consists of approximately 240 teaching days. Each day comprises of 8 working hours including an hour's interval for lunch. The teaching hours are divided between didactic lectures, practicals, demonstrations, seminars, symposia, Small Group Teaching (SGT), Self Directed Learning (SDL), Early Clinical Exposure (ECE), Integrated Learning (IGL) in various subjects and AETCOM.

Parents-Teachers Virtual Communication :

Parents are encouraged to communicate with the faculty regarding the progress of their wards. Parents-Teachers Meetings are arranged by the departments including Face-To –Face as well as by virtual communication.

Mentoring Programme :

- In order to provide the student community skill, knowledge and attitudes towards development of self and to impress on value added medical practice towards the society, V.M.K.V. Medical College & Hospitals has initiated a student MENTORING PROGRAM (SMP).

- Under SMP, a faculty shall act as a MENTOR towards a group of ten (10) students; each group also consists of a Senior Student mentor.

Clinical Society Meetings:

These are held regularly once a month and interesting clinical cases are presented and discussed on intriguing aspects of the clinical presentation, diagnosis and management of the patients. **Medical Audit Meetings** are held regularly as an internal quality assurance process to improve patient care and outcomes.

Rural Health Centre:

The VMKV Medical College & Hospital runs a Rural Health Centre by the Community Medicine Department. Two Primary Health Centres are also attached to the institution.

II MBBS Teaching Hours Distribution is as follows :

Subjects	Lectures (hours)	Small Group Teaching/ Tutorials/ Integrated learning/ Practical (hours)	Self directed learning (hours)	Total (hours)
Microbiology				
Pathology				
Pharmacology				
Forensic Medicine				
Community Medicine				
AETCOM				
Sports and extracurricular activities				
Formative assessment and Term examinations				
Total				

Time Table for II MBBS (2019 CBME Batch) – Appearing Exam in January – 2022

<table>
<tr><th>DAYS</th><th colspan="2">08.30 – 11.30 am</th><th>11.30 am – 12.30 pm</th><th>12.30 - 1.15 pm</th><th>01.15 – 02.15 pm</th><th>2.15 - 3.15 pm</th><th>3.15 - 4.15 pm</th><th>04.15 – 05.15 pm</th></tr>
<tr><td>MONDAY</td><td colspan="2" rowspan="5">OPD WARD CLINICALS</td><td>PATHOLOGY
SGL / Tutorials</td><td rowspan="8">LUNCH BREAK</td><td>MICROBIOLOGY
(Theory)</td><td><u>PHARMACOLOGY</u>
SGL / Tutorials</td><td>COMMUNITY MEDICINE</td><td>PATHOLOGY
Theory</td></tr>
<tr><td>TUESDAY</td><td>MICROBIOLOGY
SGL / Tutorials</td><td rowspan="2">PATHOLOGY
(Theory)</td><td colspan="2">PATHOLOGY Practical ‘A’ Batch
PHARMACOLOGY Practical ‘B’ Batch</td><td rowspan="2">PHARMACOLOGY
Theory</td></tr>
<tr><td>WEDNES DAY</td><td>FORENSIC MEDICINE
Theory / SGL / SDL</td><td rowspan="2">PHARMACOLOGY
(Theory)</td><td colspan="2">MICROBIOLOGY Practical ‘B’ Batch
PHARMACOLOY Practical ‘A’ Batch</td></tr>
<tr><td>THURSDAY</td><td>PHARMACOLOGY
Theory</td><td colspan="2">PATHOLOGY Practical ‘B’ Batch
MICROBIOLOGY Practical ‘A’ Batch</td><td rowspan="2">MICROBIOLOGY
Theory</td></tr>
<tr><td rowspan="2">FRIDAY</td><td>MEDICINE
(1st and 3rd week)
Theory</td><td rowspan="2">COMMUNITY MEDICINE
(Theory)</td><td>*PATHOLOGY</td><td>***PHARMACO LOGY SDL / Library</td><td rowspan="2">Extra Curricular activities</td></tr>
<tr><td>SURGERY
(2nd and 4th week)
(Theory)</td><td colspan="2">**O&G
Theory</td><td>****AETCOM</td></tr>
<tr><td rowspan="4">SATURDAY</td><td colspan="2"><u>08.30 to 09.30 am</u>
SDL / Library hour
I week – PATHOLOGY (SDL)
III week –MICROBIOLOGY (SDL)
<u>09.30 to 11.30 am</u>
Integrated Learning
I week – PHARMACOLOGY / FORENSIC MEDICINE
III week – MICROBIOLOGY / PATHOLOGY</td><td>AETCOM (SDL)
(1st&5th Saturday)</td><td colspan="4" rowspan="2"><u>Internal Assessment Exam</u>
I & III Saturday – Microbiology / Pathology / Pharmacology alternatively
V Saturday - Forensic Medicine</td></tr>
<tr><td>MENTOR PROGRAMME
(3rd Saturday)</td></tr>
<tr><td colspan="5">IV week - PANDEMIC MODULE - April 2021 to July 2021</td></tr>
<tr><td colspan="5">August 2021 to December 2021</td></tr>
<tr><td>09 to 10 am Medicine
(Theory)</td><td>10 to 11 am Surgery
(Theory)</td><td>11 am to 12 noon O&G
(Theory)</td><td></td><td>1.15 to 2.15 pm Medicine
(Theory)</td><td>2.15 to 3.15 pm Surgery
(Theory)</td><td>3.15 to 4.15 pm O&G
(Theory)</td><td></td></tr>
</table>

***1st & 3rd Friday – Pathology, **2nd & 4th Friday – O&G ; ***1st & 3rd Friday – Pharmacology ; ****2nd & 4th Friday – AETCOM**

Slow learners class during respective classes. Integrated Learning – 25 % of Teaching hours.

VINAYAKA MISSION'S KIRUPANANDA VARIYAR MEDICAL COLLEGE & HOSPITAL, SALEM

Exam pattern

MBBS Degree Exam pattern for all departments:

Theory Paper I	**-**	**100 Marks**
Theory Paper II	**-**	**100 Marks**
Practicals	**-**	**80 Marks**
Viva	**-**	**20 Marks**
		300 Marks
Theory Question pattern	**-**	**100 Marks**

Type of question	Numbers X Marks	Total marks
Section – A		
Multiple Choice Questions	**20 X 1**	**20**
Section – B		
Long Answer Questions	**2 X 15**	**30**
Short Answer Questions	**6 X 5**	**30**
Brief Answer Questions	**10 X 2**	**20**
Total		**100**

Eligibility to appear for university exams

Internal Assessment (Theory + Practicals)	50% [Theory - minimum 40% Practicals- minimum 40%]

INTERNAL ASSESSMENT (100 marks)	
Theory (50 marks)	**Practicals** (50 marks)
Theory (IA Marks + Model exam marks) **40 Marks**	Practicals (IA Marks+ Model exam marks) **30 Marks**
Log Book – Theory (Seminar, quiz, symposium & SDL) **10 Marks**	Log Book – Practicals (Certifiable competencies, research projects, problem solving exercises, conferences & co-curricular competitions) **10 Marks**
	Records **10 Marks**
Total = **50 marks**	Total = **50 marks**

Criteria for pass in University exams

Theory	50% (Each Paper minimum 40%)
Practicals + Viva	50%

Syllabus

Microbiology

GOAL :

The broad goal of the teaching of undergraduate students in Microbiology is to provide an understanding of the natural history of infectious diseases in order to deal with the etiology, pathogenesis, laboratory diagnosis, treatment, control and prevention of infections in the community.

OBJECTIVES :

Knowledge

At the end of the course the student will be able to:

1) State the infective microorganisms of the human body and describe the host parasite relationship.
2) List the pathogenic microorganisms (bacteria, viruses, parasites, fungi) and describe the pathogenesis of the diseases produced by them.
3) State or indicate the modes of transmission of pathogenic and opportunistic organisms and their sources including insect vectors responsible for transmission of infection.
4) Describe the mechanisms of immunity to infections.
5) Acquire knowledge on suitable antimicrobial agents for treatment of infections and scope of immune – therapy and different vaccines available for prevention of communicable diseases.
6) Apply methods of disinfection and sterilization to control and prevent hospital and community acquired infections.
7) Recommend laboratory investigations regarding bacteriological examination of food, water, milk and air.
8) Know about the various Hospital acquired infections and their preventive measures.
9) Knowledge on hospital infection prevention & control measures.

SKILLS:

At the end of the course, the student should be able to:

1. Plan and interpret laboratory investigations for the diagnosis of infectious diseases and to correlate the clinical manifestations with the etiological agent.
2. Use the correct method of collection, storage and transport of clinical material for microbiological investigations
3. Identify the common infectious agents with the help of laboratory procedures and use antimicrobial sensitivity tests to select suitable antimicrobial agents.

4. Perform commonly employed bed-side tests for detection of infectious agents such as blood film for malaria, □ilarial, gram staining and AFB staining and stool sample for ova and cyst.

INTEGRATION:

The student should understand infectious diseases of national importance in relation to the clinical, therapeutic and preventive aspects.

SYLLABUS

Paper-I

Section IA:

General Microbiology

Introduction and History, Morphology and Physiology of Bacteria, Sterilization & Disinfection, Laboratory Diagnosis of Bacterial Infections, Immunoprophylaxis & Immunohaematology, Collection & transport of clinical samples, Bacterial Genetics, Bacterial taxonomy, Overview, epidemiology & Pathogenesis of bacterial infections, General Parasitology and Overview of Parasitic Infections & General Mycology and Overview of Fungal Infections,

Immunology

Immunity (Innate and Acquired), Antigen & Antibody, Antigen-Antibody Reaction, Complement, Components of Immune system: Organs, Cells and Products, Immune Responses: Cell-mediated and Antibody- mediated , Hypersensitivity, Autoimmunity & Immunodeficiency disorders & Transplant and Cancer Immunology,

Hospital Infection Control

Healthcare-associated Infections & major HAI types.

Section IB:

Systemic Microbiology

Bloodstream and Cardiovascular System Infections

a. **Bacterial Blood & CVS infections:**

Infective Endocarditis and Acute Rheumatic Fever (Str.pyogenes, Enterococcus & HACEK), Rickettsial infections & Borrelia, Miscellaneous Bacterial Bloodstream Infections:Leptospirosis and Brucellosis,

b. **Viral Blood & CVS infections:**

Viral Hemorrhagic Fever (VHF) Arboviral VHF (Dengue, Chickungunya, Zika and others).

c. **Parasitic Blood & CVS infections:**

Lymphatic Filariasis(Wuchereria & Brugia), Visceral Leishmaniasis, Trypanasomiasis / S.hematobium, Systemic Candidiasis and Systemic Mycoses.

Gastrointestinal (GI) Infections

a. **Bacterial GI infections:** Gastrointestinal infective Syndrome & Infective Syndromes of Hepatobiliary System and Abdomen, Enterobacteriaceae: Diarrhoeagenic Escherichia coli, Shigellosis, Nontyphoidal Salmonellosis, Yersiniosis, Helicobacter, Campylobacter, C.difficle, Cholera, Halophilic Vibrio and Aeromonas Infections, Food Poisoning: S.aureus, Bacillus cereus, Clostridium botulinum ,Mycotoxins and Others.
b. **Viral GI infections:** Viral Gastroenteritis: Rotaviruses and Others.

c. **Parasitic GI infections:** Intestinal Protozoan Infections: Intestinal Amoebiasis, Giardiasis, Trichomoniasis & Balantidiasis, Coccidian Parasitic Infections, Blastocystosis, Sarcocystosis, Intestinal Cestode Infections: Diphyllobothrium, Taenia, Hymenolepis and Others, Intestinal Trematode Infections: Fasciolopsis buski, Schistosoma mansoni, S.japonicum and Others, Intestinal Nematode Infections: Trichuris, Enterobius, hookworm, Strongyloides, Ascaris and Others.

Hepatobiliary System Infections

a. **Viral HB infections:** Hepatitis Viruses, Miscellaneous viruses- Yellow fever, CMV & EB viruses.
b. **Parasitic HB Infections:** Amoebic Liver Abscess, Hydatid Disease (Echinococcosis), Trematode infections (Fasciola hepatica, Clonorchis and Ophisthorchis) and others.

Paper-II
Section IIA:
Skin, soft-tissue and musculoskeletal system infections

Infective syndromes of skin, soft tissue and musculoskeletal systems & Staphylococcal infections.

a. **Bacterial SS infections:** Beta hemolytic streptococcal infections, Gas gangrene (Clostridium perfringens), Clostridium tetani and Infections due to non-sporing anaerobes, Leprosy (Mycobacterium leprae), Actinomycetes, Nocardiosis, Non venereal treponematoses & others.
b. **Viral SS infections:** Viral exanthems & cutaneous Viral Infections, Herpes viruses (Herpes simplex virus, Varicella zoster & HHV-6 & 7 Infections), Pox viruses(Small pox, Molluscum contagiosum), Measles, rubella, parvovirus, Coxsackie viruses & others,
c. **Parasitic SS Infections:** Cysticercosis, Filarial Tissue nematode, Trichinella spiralis, Cutaneous Leishmaniasis, Miscellaneous Tissue nematode (Onchocerca, Loa loa, Mansonella) , Dracunculus medinensis & Larva migrans,
d. **Fungal SS Infections:** Superficial fungal infections, Subcutaneous fungal infections, Candidiasis(Cutaneous and mucosal) & Penicillium marneffei infection,

Respiratory tract infections

Infective syndrome of respiratory system.

a. **Bacterial RT infections:** Bacterial pharyngitis: Streptococcus pyogenes pharyngitis, Diphtheria & Others. Bacterial lobar pneumonia: Pneumococcal pneumonia, Haemophilus influenza. Pertussis (Bordetella Pertussis) & Infections due to non fermenting Gram Negative Bacilli: Pseudomonas, Acinetobacter, Burkholderia & others. Mycoplasma & Ureaplasma (Cell wall deficient forms), Bacterial atypical Interstitial pneumonia: Chlamydia, Legionella& others, Tuberculosis & non-tuberculous mycobacteria infections.
b. **Viral RT infections:** Myxovirus infections of Respiratory Tract: Influenzae/Orthomyxoviruses, Parainfluenza, Mumps, Respiratory syncytial Virus

& Corona Virus infections Including COVID 19 & Rhinovirus, adenovirus and infectious mononucleosis (Epstein Barr Virus).

c. **Parasitic RT infections:** Paragonimiasis, Tropical pulmonary oesinophilia, Loffler,s syndrome, Respiratory phases of other parasites.

Section IIB:

Central Nervous System infections

Infective syndromes of CNS

a. **Bacterial CNS infections:** Bacterial Meningitis
Acute Baterial (pyogenic) meningitis: Neisseria meningitidis, Streptococcus pneumoniae, Streptococcus agalactiae, Haemophilus influenza & Listeria. Chornic Baterial meningitis: Tubercular meningitis, Spirochaetal meningitis, Lyme disease & Others, Tetanus.

b. **Viral CNS infections:** Viral Meningitis & Myelitis: Poliomyletis, Coxsackie virus Infection, Mumps, HSV, Arboviral encephalitis (JE & West Nile), HIV, Viral Encephalitis & Encephalopathy, Rabies and HSV encephalitis, Nipah & Hendra virus infection, Slow virus & Prion Disease & Others.

c. **Parasitic & Fungal CNS Infections: Parasitic Infections** - Neurocysticercosis, Toxoplasmosis, Schistosomiasis, Free Living Amoeba infections, Cerebral Amoebiasis & African sleeping sickness, Fungal infections - Cryptococcal meningitis & Others.

d. **Urogenital Tract Infection:** Bacterial Infection: Enterobacteriaceae, Enterococcus & Others. Viral (BK Virus), Parasitic (Schistosoma haemotobium) & Fungal Infections. Ulcerative genital disease: Syphilis, Lymphogranuloma Venerum, Granuloma inguinale, soft chancre & Genital Herpes. Gonorrhea & Non Gonococcal Uritheritis(Chlamydia, trachomatis & Others). Vulvovaginitis (Trichomoniasis, Bacterial vaginosis,Vaginal Candidiasis). Other Genital tract Infections of females & males.

Miscellaneous infective syndrome

Opportunistic Infections/Transplant Infections/Transfusion - Trasmitted Infections, Emerging & Re- emerging Infections, National Health programmes for Communicable diseases & Pandemic Management, Environmental Surveillance (Bacteriology of Water, Air and Surface)

Microbiology Practical Syllabus

1. Demonstration of Microscopy

STAINING METHODS

1. Demonstration of staining methods - Gram staining & Acid fast staining

CASE BASED SCENARIO EXERCISE

1. Culture media & Methods
2. Collection & transport of clinical samples
3. Laboratory Diagnosis of Viral infections (Serology & Molecular)
4. Laboratory Diagnosis of Parasitic infections (Stool Microscopy & Blood smear Examination)
5. Laboratory Diagnosis of Fungal infections
6. Laboratory Diagnosis of Pyogenic meningitis / Aseptic meningitis
7. Laboratory Diagnosis of Bacterial infections
8. URTI Throat swab certification /LRTI sputum certification
9. Laboratory Diagnosis of Sepsis / Catheter-related bloodstream infection /Rheumatic Fever/Infective Endocarditis
10. Laboratory Diagnosis of Enteric Fever/ Brucellosis/Leptospirosis/Dysentery/ Diarrohoea
11. Laboratory Diagnosis of HIV/ Dengue

OSPE

1. Hand Hygiene
2. Personal protective equipment (PPE)
3. Biomedical waste management (BMW)
4. Sterilization and Disinfection
5. Needle stick injury

CERTIFICATION EXERCISE

1. Hand Hygiene
2. Personal protective equipment (PPE)
3. Biomedical waste management (BMW)
4. Gram staining
5. Acid fast staining

REFERENCE BOOKS:

1. Diagnostic Microbiology – Bailey and Scott.
2. Koneman's Color Atlas and Textbook of Diagnostic Microbiology.
3. Mackie & McCartney Practical Medical Microbiology

General Instructions

General instructions to be followed by the students during the demonstrations & practicals:

1) Students should come to the practical class in buttoned aprons (coats) & long hair of women students should either be tied up or covered by the apron.
2) Students wearing jeans, T shirts and slippers are not permitted to attend the class.
3) Late comers will not be allowed in the practical class room.
4) Students shall work in small groups alloted to one teacher.
5) Talking & unnecessary movement of the student in the practical class from place to place is forbidden.
6) Each student must bring his/her practical record book properly covered with brown sheet, labelled and duly signed by their respective group teacher.
7) Students must possess lead pencil, eraser, coloured pencils and a piece of thin soft cloth for cleaning and wiping the microscopic slides, coverslips, lens etc. Avoid the use of the handkerchief.
8) Each experiment will begin with a short discussion and instructions. Do not begin until you receive your instructions. Ask questions when you do not understand the method & preparation of any experiment.
9) Check the microscope and clean the eye piece and objectives with a thin soft cloth. Ensure that the condenser, diaphragm & mirror are correctly adjusted.
10) Record all observations. Sketches and diagrams should be neatly drawn in same colour as seen through the microscope keeping their relative size.
11) Each student should show his/her work including diagram in the practical record book & must get them signed by their respective group teacher with date before he/she gets his/her attendance for the day's practical class.
12) Many of the organisms which you will be working are potentially pathogenic. Hence avoid any hand to mouth contacts.
13) Water bottles & eatables are strictly forbidden in the practical classroom.
14) Report immediately all accidents such as cuts, burns, spilled culture or reagents to your instructor. Take all precautions to avoid such accidents.
15) Discard slides, cover slips and all dirty glassware in the container provided ,after the work has been completed.
16) The student will be held responsible for the breakages and missing articles loaned to him/her and will be charged for the same.
17) The above instructions must be strictly followed. The student who does not follow the above rules will be sent out of the class.
18) After completion of day's work & before leaving the classroom, wash your hands with soap & water.
19) At the end of the session, the record book completed in their own handwriting should be submitted for scrutinising and certification by the Professor & HOD for having completed the course in microbiology.

Teaching hours :

Total number of Teaching hours as per MCI norms is 198, which includes theory – 80 hours, Practicals / Demonstrations / Problem based learning – 72, SGD – 36 hours, SDL - 10 hours.

Integrated Teaching

The Paraclinical Departments conduct Horizontal & Vertical Integrated Teaching Programme for better understanding of clinical subjects.

Case based learning is also done in the department.

University Examination pattern

MBBS Degree Exam pattern for all departments:

Theory Paper I (Section IA & IB)	**- 100 Marks (Each section carries 50 marks)**
Theory Paper II (Section IIA & IIB)	**- 100 Marks (Each section carries 50 marks)**
Practicals	**- 80 Marks**
Viva	**- 20 Marks**
	300 Marks

Paper-I

Section IA: General Microbiology, Immunology and hospital infection control

Section IB: Infections of bloodstream and cardiovascular system, gastrointestinal tract, hepatobiliary system

Paper-II

Section IIA: Infections of skin, soft tissue and musculoskeletal system and respiratory system

Section IIB: Infections of central nervous system, genitourinary and sexually transmitted infections and miscellaneous

Mark distribution for each paper

Type of question	Numbers X Marks	Total marks
Section – A		
Long answer Questions (LAQ)	**1 x 10**	**10**
Short Answer Questions (SAQ)	**4 X 5**	**20**
Brief Answer Questions (two marks)	**5 X 2**	**10**
MCQ's	**10 X 1**	**10**
Total		**50**
Section - B		
Long Answer Questions (LAQ)	**1 x 10**	**10**
Short Answer Questions (SAQ)	**4 X 5**	**20**
Brief Answer Questions (two marks)	**5 X 2**	**10**
MCQ's	**10 X 1**	**10**
Total		**50**
GRAND TOTAL		**100**

One short note (5 marks) in Section B of Paper I and II will cover AETCOM module (Total: 10 marks)

Criteria for pass in University exams

Theory	50% (Each Paper minimum 40%)
Practicals + Viva	50%

II MBBS Microbiology

Recommended Text Books

1. **Essentials of Medical Microbiology – 3rd edition by Apurba Shastry and Sandhya Bhat (CBME Curriculum)**

2. Textbook of Microbiology – Ananthanarayan & Paniker (CBME Curriculum)

3. Textbook of Microbiology – P.Chakrabothy

4. Textbook of Medical Parasitology – Jayaram Paniker

5. Textbook of Parasitology – K.D.Chatterjee

Reference Books

1. Diagnostic Microbiology – Bailey and Scott

2. Koneman's Color Atlas and Textbook of Diagnostic Microbiology

3. Mackie & McCartney Practical Medical Microbiology

4. Harrison's Infectious Diseases – 3rd edition

5. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases - 9th Edition

PRACTICAL

Practical Marks – 100

(Practical - 80 marks + Viva – 20 marks) (Total 3 Hours)

Practical Mark Distribution

Exercise – 1: Bacteriology staining (Gram's staining / AFB staining)	20 Marks
Exercise – 2: Parasitology exercise (Stool examination / Blood parasites)	20 Marks
Exercise – 3: OSPE (Infection control & prevention exercise)	20 Marks
Exercise – 4: Case based scenario exercise	20 Marks
TOTAL	**80 Marks**
VIVA VOCE	**20 Marks**

(Viva voce marks are to be added to the Practical, not to Theory)

GRAND TOTAL	**100 Marks**

Internal Assessment

I - IA Exam (June)			II - IA Exam (August)			III - IA Exam (October)			Model Exam (December)			Grand Total
Theory	Practical	Total	Theory	Practical	Total	Theory	Practical	Total	Theory	Practical	Total	
100	100	200	100	100	200	100	100	200	100	100	200	800

Theory = 400 marks

Practicals = 400 marks

GRAND TOTAL = 800 marks

Eligibility to appear for university exams

Internal Assessment (Theory + Practicals)	50% of total marks (combined in Theory & Practicals) (Minimum 40% marks in Theory & Practicals separately)

- The minimum number of internal assessment recommended by MCI is three, including the Model examination.
- It is mandatory for the students to appear for all the Internal Assessment Examinations.
- Internal Assessment marks for Theory will be out of 400 and Practical will be out of 400.
- Internal Assessment marks will not to be added to the University Examinations marks and will reflect as a separate head of passing at the summative examination.

Department of Microbiology
Blue print

PAPER I

S.No	Topics	Total 100 marks	Long answer Questions (LAQ) (10 X 1 = 10 marks)	Short notes (SAQ) (4 X 5 = 20 marks)	Brief Answer Questions (two marks) (2 X 5 = 10 marks)	MCQ's (1 X 10 = 10 marks)
I	General Microbiology and Immunology (Section IA)	50	1	4	5	10
II	Infections of bloodstream and cardiovascular system, gastrointestinal tract and hepatobiliary system (Section IB)	50	1	4	5	10
	Total Questions		2	8	10	20
	Total marks		20	40	20	20
	Grand Total			**100 marks**		

PAPER II

S.No.	Topics	Total 100 marks	Long answer Questions (LAQ) (10 X 1 = 10 marks)	Short notes (SAQ) (4 X 5 = 20 marks)	Brief Answer Questions (two marks) (2 X 5 = 10 marks)	MCQ's (1 X 10 = 10 marks)
I	Infections of skin, soft tissue and musculoskeletal system and respiratory system (Section IIA)	50	1	4	5	10
II	Infections of central nervous system, genitourinary and sexually transmitted infections, hospital infection and control and miscellaneous (Section IIB)	50	1	4	5	10
	Total Questions		2	8	10	20
	Total marks		20	40	20	20
	Grand Total			**100 marks**		

Pathology

1. Goal

The broad goal of the teaching of undergraduate student in Pathology is to provide the students with a comprehensive knowledge of the mechanisms and causes of disease, in order to enable him/her to achieve complete understanding of the natural history and clinical manifestations of disease.

2. Educational objectives

2.1. Knowledge

At the end of the course, the student should be able to:-

2.1.1. Describe the structure of a sick cell, mechanisms of cell degeneration, cell death and repair and be able to correlate structural and functional alterations.

2.1.2. Explain the pathophysiological processes which govern the maintenance of homeostasis, mechanisms of their disturbance and the morphological and clinical manifestations associated with it.

2.1.3. Describe the mechanisms and patterns to tissue response to injury such that she/he can appreciate the pathophysiology of disease processes and their clinical manifestations.

2.1.4. Correlate normal and altered morphology (gross and microscopic) of different organ systems in common diseases to the extent needed for understanding of disease processes and their clinical significance.

2.2. Skills At the end of the course, the student should be able to:

2.2.1. Describe the rationale and principles of technical procedures of the diagnostic laboratory tests and interpretation of the results;

2.2.2. Perform the simple bed-side tests on blood, urine and other biological fluid samples;

2.2.3. Draw a rational scheme of investigations aimed at diagnosing and managing the cases of common disorders;

2.2.4. Understand biochemical/physiological disturbances that occur as a result of disease in collaboration with pre-clinical departments.

2.3. Integration At the end of training he/she should be able to integrate the causes of disease and relationship of different etiological factors (social, economic and environmental) that contribute to the natural history of diseases most prevalent in India.

GENERAL PATHOLOGY AND HAEMATOLOGY

1. Cell Injury

-Mechanism of Cell Injury, Reversible and irreversible Cell injury, Adaptation, Apoptosis, Intracellular accumulations (Lipid, protein and glycogen), Pigment and pigment disorders, Pathological calcification

2. Inflammation

- Acute inflammation – vascular phenomenon and cellular events, Chemical mediators, Morphological patterns of acute inflammation, outcome of acute inflammation. chronic inflammation and granulomatous inflammation

3. Repair, regeneration and healing

- Normal cell cycle, cutaneous wound healing, healing by first intention and second intention, fracture healing.

4. Hemodynamic disorder and Thromboembolism

- Hyperemia, congestion, Edema, thrombosis, types of embolism, infarction and its types, shock.

5. Genetic disorders.

- Mutations, Marfan syndrome, Ehlers Danlos syndrome, Lysosomal storage disorder, glycogen storage disorders, alkaptonuria, trisomies, genetics disorders involving the sex chromosome, diagnoses of genetic disorder.

6. Diseases of immunity

- Cells of immune system, mechanisms of hypersensitivity reactions, autoimmune diseases, immuno deficiency syndromes including AIDS, amyloidosis.

7. Neoplasia

- Tumor nomenclature, difference between benign and malignant neoplasms, mechanisms and types of metastasis, oncogenes, tumor suppressor genes, carcinogenesis (physical, chemical, biological), pre-neoplastic conditions, para-neoplastic syndromes, lab diagnosis of cancer.

8. Infectious diseases

- Tuberculosis, typhoid, leprosy, syphilis, fungal infections (candidiasis, maduramycosis), Actinomycosis, Rhinosporidiosis, Amoebiasis, malaria

9. Environment and nutritional disorder

- Radiation injury, PEM, Vitamin deficiency (A,B,C,D,K and E), Obesity, Alcoholism, Smoking.

10. Red blood cell disorders

- Classification of anemia, iron deficiency anemia, Megaloblastic anemia, pernicious anemia, hemolytic anemia (spherocytosis, sickle cell anemia, thalessemia, G6PD, PNH), aplastic anemia, Polycythemia.

11. White blood cell disorders

- Leucopenia and leucocytosis, leukemia (AML, ALL, CML, CLL), Multiple myeloma, Lymphoma, HL, NHL.

12. Bleeding disorders

- Bleeding due to vascular disorders, platelet disorders, coagulation factor deficiency (Hemophilia A, B and VWD), DIC, Lab diagnosis of bleeding disorders.

SYSTEMIC PATHOLOGY:

13. Blood vessels
- Atherosclerosis, Aneurysms, Tumors

14. Heart
- Congenital heart disease (ASD, VSD, PDA, Fallot's), Ischemic heart disease, Rheumatic heart disease, Infective endocarditis, Hypertensive heart disease, cardiomyopathy, myocarditis, tumors of heart. Pericarditis, pericardial effusion.

15. Respiratory system
- COPD (chronic bronchitis, Emphsema), Bronchial asthma, Bronchiectasis, Pneumonoconiosis (Asbestosis, Silicoses, Berylliosis), Tuberculosis, Lobar pneumonia, Bronchopenumonia, lung abscess, Tumors of lung and pleura, Pleural effusion.

16. Head and neck
- Precancerous conditions of the oral cavity, tumors of oral cavity, benign and malignant salivary gland tumors.

17. GIT
- Carcinoma of esophagus, gastritis, Peptic ulcer, benign and malignant tumors of stomach, Small intestine: Carcinoid, Mal-absorption syndrome. Crohns disease and Ulcerative colitis, Polyps of intestine, Tumors of colon and rectum, Appendicitis, tumors of appendix, Peritoneum (mesothelioma), peritonitis

18. Liver, gall bladder and Pancreas.
- Jaundice – Viral Hepatitis, Portal hypertension, cirrhosis, tumors of liver, Acute and chronic cholecystitis, cholelithiasis, Tumors of Gall bladder, acute and chronic pancreatitis, tumors of pancreas.

19. Renal system
- Polycystic kidney, acute and chronic glomerulonephritis, nephritic syndrome, glomerular lesions in systemic disease, ATN, acute and chronic pyelonephritis, Urolithiasis, Tumors of kidney.

20. Lower urinary tract and male genital system.
- Urolithiasis, tumors of bladder, tumors of testis, granulomatous orchitis, benign enlargement of prostate, carcinoma of prostate.

21. Female genital tract
- Benign and malignant tumors of vulva, Cervical intraepithelial neoplasia, Carcinoma cervix, Endometriosis, adenomysosis, Endometrial hyperplasia, Carcinoma endometrium, leiomyoma and leiomyosarcoma of myometrium, Tumors of ovary, tumors of trophoblastic tissue.

22. Breast
- Benign and malignant tumors of breast, Cystosarcoma Phyllodes.

23. Endocrine system.
- Thyroid: Goitre, Hypo and hyperthyroidism, tumors of thyroid, thyroiditis – Hashimotos, Pancreas: Endocrine pancreas (Diabetes mellitus), Adrenals: Pheochromocytoma, Neuroblastoma, MEN.

24. Skin
- Pre-malignant conditions of skin, malignant tumors of epidermis - Basal cell carcinoma, Squamous cell carcinoma. Naevus, malignant melanoma, mycosis fungoides

25. Bones and joints

- Gout, Osteomyelitis, Benign and malignant tumors of bone – Ewings sarcoma, Osteoclastoma, Osteogenic sarcoma, Rheumatoid arthritis, synovial sarcoma.

26. Soft tissue

- Benign and malignant soft tissue tumors, Rhabdomyosarcoma, Duchenne muscular dystrophy.

27. Central nervous system

- Meningitis - types, CSF analysis, Tumors of meninges, CNS tumors – Glioma, astrocytoma, Oligodendroglioma, Ependymoma, Medulloblastoma. Peripheral nerve tumors – Schwannoma, Neurofibroma, Malignant tumors

28. Eye and ear

- Retinoblastoma, CSOM.

CLINICAL PATHOLOGY

1. Introduction to Clinical Pathology – Methods of sample collection
2. Hemoglobin estimation – Classification, methods, types, practical
3. Packed cell volume – demonstration discussion
4. Differential count – demonstration and practical
5. Peripheral smear study – staining and reporting
6. Erythryocyte sedimentation rate – demonstration and discussion
7. Blood indices – discussion
8. Blood grouping – cross matching
9. Bleeding time and clotting time – practical and discussion
10. Reticulocyte count – slide discussion
11. Platelet count – counting and morphology study
12. Osmotic fragility test – discussion and demonstration
13. Coomb's test – discussion
14. Bone marrow aspiration and biopsy – Indication, contraindication, staining, description, procedure and slide discussion
15. Sputum examination – discussion
16. CSF examination – demonstration of procedure and cell count and discussion
17. Seminal analysis – slide discussion
18. Pap smear, vaginal and cervical smear study
19. Exfoliative cytology, examination of body fluids (peritoneal, pleural, pericardial and synovial) – slide discussion
20. Tissue processing – demonstration
21. Special stains - discussion
22. Bone marrow charts – discussion
23. Instruments – demonstration
24. Examination of urine – Physical analysis, chemical analysis, microscopic examination – demonstration, discussion and practical.

Practical

1. Cell Injury

Introduction to Histopathology and cytology Laboratory & Museum. Cloudy swelling kidney – specimen & slide.

Fatty change – Liver specimen & slide

2. Inflammation

Acute appendicitis Specimen and slides

Chronic inflammation, Tuberculous granuloma, Foreign body granuloma slides.

3. Repair, regeneration and healing

Granulation tissue

4. Hemodynamic disorder and Thromboembolism

Venous thrombus specimen, Organisation of thrombus slides.

Filarial leg – specimen, CVC – Liver, Lung, Spleen – specimen and slides.

Embolus – Pulmonary – Specimen, Infarction – Heart, Lung, Specimen and Gangrene foot – Specimen.

5. Genetic disorders.

Chart: Karyotyping-Down's,Klinefelter's,Turner's

6. Diseases of immunity

Amyloid – Liver, Spleen, Kidney Specimens

7. Neoplasia

Benign – Lipoma, Leiomyoma, capillary and cavernous angioma schwannoma. Cystic Teratoma – Ovary, Squamous papilloma, Villous papilloma, Adenomatous polyp – Intestine, Chondroma.

Malignant – squamous Cell carcinoma, Chondrosarcoma, Osteosarcoma, Malignant Melanoma – All specimens and slides. Metastic Deposit – Lymphnode, Cytology – Malignant Cells.

8. Infectious diseases

Actinomycosis, Maduramycosis Specimens and slides. Syphilis – Gumma.

Tuberculous lymphadenitis Tuberculosis – Lung primarycomplex and adult Tuberculous. Leprosy – Lerpromatous & Tuberculoid.

Amoebic abscess (LIVER) and ulcer intestine, Malarial – Spleen, Specimens.

9. Environment and nutritional disorder

10. Red blood cell disorders

Perform

Hb, R.B.C. Count

Iron deficiency anaemia view the slide & record

Macrocytic anaemia view the slide & record

Megaloblastic marrow view the slide & record

Aplastic marrow, Peripheral smear study, view the slides & record

11. White blood cell disorders

Total W.B.C. count

Differential count

Neutrophilia

Eosinphilia

AML, ALL, CML, CLL

12. Bleeding disorders

Platelet counts

13. Blood transfusion reactions – grouping and crossmatching

Blood group & RH Factor

14. Lymphoreticular system – HL, NHL, splenomegaly.

Lymphomas – specimen

Lymphomas – slides

Secondary deposits (specimen) & slide

SYSTEMIC PATHOLOGY:

15. Blood vessels

Atherosclerosis – Aorta – Specimen and slide. Aortic Aneurysms – Syphilitic and Atherosclerotic – Specimen.

16. Heart

Rheumatic mitral stenosis, Bacterial endocarditis, Myocardial Infarction, Hepertensive Cardiac Hypertrophy – Specimens.

17. Respiratory system

Lobar pneumonia – Red & Grey hepatization, Bronchiectasis Lung abscess, pulmonary tuberculosis, Emphysema – specimen & slide, Bronchogenic carcinoma, Secondary deposit lung – specimen.

18. Head and neck

Mixed Tumors – salivary gland specimen & slide, carcinoma oesophagus – specimen

19. GIT

Gastric ulcer and carcinoma – specimen & slide Ulcers of the small intestine – typhoid Chron's large intestine amoebic ulcer, carcinoma small & large intestines.

20. Liver, gall bladder and Pancreas.

Cirrhosis – liver specimen with slides

Hepatoma – specimen with slides

Gall stone - specimen

21. Renal system

Contracted kidney specimen

Chronic nephritis specimen

Chronic pyelonephritis specimen & slides

Transitional cell carcinoma specimen and slides

22. Lower urinary tract and male genital system.

Carcinoma penis – specimen and slides

Seminoma specimen and slides

B.H.P. specimen and slides

23. Female genital tract

Carcinoma – Cervix specimen, fibroid uterus slides
Carcinoma endometrium slide
Endometrium proliferative / slide
Endometrium secretory / slide
Serous cystadenoma – specimen & slide
Musinous cystadenoma specimen & slide
Papillary serous carcinoma specimen
Dysgerminoma
Dermoid cyst

24. Breast

Fibroadenoma breast specimen & slide
Infiltrating ductal carcinoma specimen & slide

25. Endocrine system.

Colloid goitre specimen / slide
Toxic goitre specimen / slide
Follicular adenoma specimen / slide
Papillary carcinoma specimen / slide

26. Skin

Basal cell carcinoma specimens and slides
Squamous cell carcinoma specimens and slides
Malignant melanoma specimens and slides.

27. Bones and joints

Osteogenic sarcoma, giant cell tumour, Ewings sarcoma - Specimens and slides.

28. Soft tissue

29 Central nervous system

CSF in meningitis – chart.

30.Eye

Recommended books :

1. Text book of Pathology- Robbins -10th edition
2. Clinical Haematology in Medical Practice – de Gruchy's Clinical Heamatology-5th edition

Reference books :

1.Text book of Haematology – William's Hematology -10th edition

2.Text book of Haematology – Wintrobe's Clinical heamatology-14th edition

THEORY INTERNAL ASSESSMENT AND CLASS TEST
MBBS-2021

S.no	MONTHS	THEORY TOPICS	DATE/MONTH OF IA EXAM
1.	APRIL-JUNE	GENERAL PATHOLOGY • Cell injury and adaptation • Inflammation and wound healing • Hemodynamics • General neoplasia • Immunology	JUNE
2.	MAY-JULY	GENERAL PATHOLOGY • Genetics • Environment and nutrition SYSTEMIC PATHOLOGY • Gastrintestinal tract • Hepatobiliary tract • Bone	JULY
3.	JULY-AUGUST	SYSTEMIC PATHOLOGY • Central nervous system • Endocrine system	AUGUST CLASS TEST
4.	AUGUST-SEPTEMBER	Hematology Blood Vessels	SEPTEMBER
5.	SEPTEMBER-OCTOBER	SYSTEMIC PATHOLOGY • Cardio vascular system • Respiratory system • Male genital tract • Female genital tract	OCTOBER
6.	OCTOBER-NOVEMBER	SYSTEMIC PATHOLOGY • Renal system • Skin • Soft tissue	NOVEMBER- CLASS TEST
7.	DECEMEBER	MODEL AND MEDAL EXAM	DECEMBER

PRACTICAL INTERNAL ASSESSMENT
MBBS-2021

S.no	Months	Practical Topics	Date/Month of IA Exam
1.	APRIL-JUNE	Major experiment, Blood grouping and Hb estimation	JUNE
2.	JUNE-JULY	Urine analysis, Histopathology slides and Gross	JULY
3.	JULY-SEPTEMBER	Hematology slides, Charts	SEPTEMBER
4.	SEP-DECEMBER	Model and Medal Exam	DECEMBER

Integrated Teaching

The paraclinical departments conduct Horizontal & Vertical Integrated Teaching Programme for better understanding of clinical subjects.

The following topics shall be covered in details with regards to integration

1. Anaemia
2. Rheumatic fever
3. Myocardial infarction

Problem based learning is also done in the department.

The following topics shall be covered in each question paper.

Pathology Paper I :

1. General Pathology
2. Hematology (Sections A & B to be equally covered)

Pathology Paper II:

1. Systemic Pathology (Sections A & B to be equally covered)

***(Section I :** Salivary Glands, Oral Cavity , CVS, RS, GIT, and Liver, GB &*
***Section II:** GUT, Bone, Muscle, Skin, Endocrine, Breast and CNS*
Both sections should be equally covered.)

Paper –I

General pathology and Haematology

Cell Injury and adaptations, Inflammation & wound healing, Hemodynamic disorder and Thrombo embolism, Genetic disorders, Diseases of immunity, Neoplasia, Infectious diseases, Environment and nutritional disorder, Radiation injury, PEM, Vitamin deficiency (A,B,C,D,K and E), Obesity, Alcoholism, Smoking.

Red blood cell disorders, White blood cell disorders, Bleeding disorders

platelet disorders, coagulation factor deficiency (Hemophilia A, B and VWD), DIC, Lab diagnosis of bleeding disorders, Blood transfusion reactions – grouping and crossmatching & HL, NHL, splenomegaly.

Paper – II

Systemic Pathology

Blood vessels, Heart, Respiratory system, Head and neck, GIT, Liver, gall bladder and Pancreas, Renal system & Lower urinary tract, Male genital system, Female genital tract, Breast, Endocrine system, Skin, Bones and joints, Soft tissue, Central nervous system & Eye

PRACTICAL : Practical I & II of 1 hr 30 min each (Total 3 hrs) duration for 80 marks

PRACTICAL I	**MARKS**
Ten spotters – Instrument (2), Histopathology slides (5), Specimen (3)	10 Marks
Urine analysis – Complete physical examination. Chemical analysis of two abnormal constituents.	15 Marks
PRACTICAL II	**MARKS**
Hematology –Major exercise – peripheral smear with DC	15 Marks
Hematology –Minor exercise – Hemoglobin (Sahli's method)	10 Marks
Hematology –OSPE- Blood grouping	5 Marks
Special hematology slide / chart – 2 nos. 2x3	10 Marks
Cytology slide (Vaginal / fluid)/ chart – 2x3	5 Marks
Problem based exercise with questions	10 Marks
TOTAL	**80 MARKS**

Oral – 20 marks conducted after practical examination.

Topics	**Marks**
General Pathology	5 Marks
Hematology and lymphoreticular system	5 Marks
CVS, RS, GIT, and Liver	5 Marks
GUT, Bone, Muscle, Skin, Endocrine, Breast and CNS	5 Marks
Total	20 Marks

UNIVERSITY EXAM PATTERN

II MBBS EXAMINATION

Theory paper I	**100 marks**
Theory paper II	**100 marks**
Practicals	**80 marks**
VIVA	**20 marks**
Total marks	**300**

BLUEPRINT OF QUESTION PAPER

PATHOLOGY

General Theory Question Paper Pattern:
Two papers each of 3 hours duration and carrying 100 marks each.

Marks distribution for each paper:

Type of question	**Numbers X Marks**	**Total Marks**
Multiple Choice Questions	20 X 1	20
Short Notes	6 X 5	30
Brief Answers	10 X 2	20
Essay	2 X 15	30
Total		**100**

DEPARTMENT OF PATHOLOGY
EXAMINATION BLUE PRINT

PAPER – I

S.No	Topics	Essay (2x15=30)	Short Notes (6x5=30)	MCQs (20x1=20)	Brief Answers (10x2=20)	Total Marks
1.	Cell injury & adaptation		1x5=5 **or**	2x1=2	2x2=4 **or**	
2.	Inflammation and wound healing / Haemodynamic disorders and Thromboembolism / Neoplasia	1x15=15	1x5=5 (from the topic not covered in essay) **or**	5x1=5	2x2=4 (from the topic not covered in essay and short notes) **or**	
3.	Diseases of immunity		1x5=5 **or**	2x1=2	2x2=4 **or**	
4.	Genetic disorders		1x5=5 **or**	1x1=1	1x2=2 **or**	
5.	Infectious diseases (TB,Syphilis & Typhoid)		1x5=5 **or**	1x1=1	1x2=2 **or**	
6.	Nutritional diseases (PEM, Vitamin deficiency) (A,B.C.D.K and E) and Environmental diseases		1x5=5 **or**	5x1=5	1x2=2 **or**	
7.	Red blood cell disorders / White blood cell disorders and lymph nodes	1x15=15	1x5=5 (from the topic not covered in essay) **or**	3x1=3	2x2=4 (from the topic not covered in essay and short notes) **or**	
8.	Platelet & bleeding disorders		1x5=5	1x1=1	1x2=2	
	Total	**30**	**30**	**20**	**20**	**100**

DEPARTMENT OF PATHOLOGY
PAPER – II

S. No	Topics	Essay (2x15=30)	Short Notes (6x5=30)	MCQs (20x1=20)	Brief Answers (10x2=20)	Total Marks
1.	Cardiovascular system & Blood vessels / Respiratory System / Gastro Intestinal Tract (GIT)	1x15=15	1x5=5 (from the topic not covered in essay) **or**	5x1=5	2x2=4 (from the topic not covered in essay and short notes) **or**	
2.	Head and neck		1x5=5 **or**	1x1=1	1x2=2 **or**	
3.	Hepatobiliary System & Pancreas		1x5=5 **or**	3x1=3	2x2=4 **or**	
4.	Renal System / Lower Urinary Tract & Male Genital System / Breast & Female Genital Tract	1x15=15 (From male genital system, female genital tract/renal system)	1x5=5 (Female genital tract / Breast from the topic not covered in essay) **or**	5x1=5	2x2=4 (from the topic not covered in essay and short notes) **or**	
5.	Endocrine System		1x5=5 **or**	2x1=2	2x2=4 **or**	
6.	Bones, Joints and Soft tissue Tumour & Skin		1x5=5 **or**	1x1=1	2x2=4 **or**	
7.	Peripheral Nerves and Skeletal muscle & Eye		1x5=5 **or**	1x1=1	1x2=2 **or**	
8.	Central Nervous System		1x5=5	2x1=2	1x2=2	
	Total	**30**	**30**	**20**	**20**	**100**

INSTRUCTION TO THE STUDENTS

I. LECTURE CLASSES:

* Students are instructed to keep a separate long size assignment notebook exclusively for Pathology.
* They are instructed to take class notes in regular manner.
* The lecture class notes will be verified during the tutorial hours.

II. TUTORIAL CLASSES (GROUP TEACHING) :

* Tutorial Classes will be conducted each week during the first lecture class.
* Students are instructed to read the previous week lecture topics and come prepared for the tutorial / Viva / Small group discussion.
* Students should write down the short answer for the questions in the assignment note book after the Tutorial / Small group discussion class.
* The notebook which will be checked by the teachers in the next class.

III. PRACTICAL CLASSES:

* Students will not be allowed to the practical class without wearing apron, Record note and assignment note. They have to write the practical classes notes and observation in assignment note.
* Previous class practical exercise and the observations and interpretation of results should be written in the record notebook before entering the practical class. If not, ½ mark will be detected in Record marks, for each late submission.

IV. INTERNAL ASSESSMENT EXAMINATIONS:

* Internal assessment examinations will be conducted every month both theory and practicals, alternatively.
* Final IA marks will be given entirely on the basis of IA exam marks conducted during the entire course.
* IA exam progress report will be sent to the parents.

V. ATTENDANCE:

* Regular attendance is compulsory.
* Leave letter sanctioned by the Dean should be submitted before going on leave.
* Attendance percentage and IA marks will be sent to the parents periodically.
* Students with less than 80 % attendance and less than 50 % of IA marks will not be allowed to appear for the university exams.

Pharmacology

GOAL :

The broad goal of the teaching of undergraduate students in Pharmacology is to inculcate a rational and scientific basis of therapeutics.

II) OBJECTIVES :

KNOWLEDGE

At the end of the course, the student shall be able to :

1. Describe the pharmacokinetics and pharmacodynamics of essential and commonly used drugs :
2. List of indications, contraindications, interactions and adverse reactions of commonly used drugs :
3. Indicate the use of appropriate drug in a particular disease with consideration to its cost effieasy and safety for
    i. Individual needs
    ii. Mass therapy under national health programme
4. Describe the pharmacokinetic basis, clinical presentations, diagnosis and management of common poisonings.
5. List the drugs of addiction and recommend the management.
6. Classify environmental and occupational pollutants and state the management issues.
7. Indicate causation in prescription of drugs in special medical situations such as pregnancy, lactation, infancy and old age.
8. Integrate the concept of rational drug therapy in clinical pharmacology
9. State the principles underlying the concept of “Essential Drugs”.
10. Evaluate the ethics and modalities in the development and introduction of new drugs.

SKILLS :

At the end of the course, the student should be able to:

1. Prescribe drugs for common ailments.
2. Recognise adverse reactions and interactions of commonly used drugs.
3. Observe experiments designed for study of effects of drugs, bioassay and interpretation of the experimental data.
4. Scan information on common pharmaceutical preparations and critically evaluate drug formulations.

INTEGRATION :

Practical knowledge of use of drugs in clinical practice will be acquired through integrated teaching with clinical departments and pre clinical departments.

THEORY SYLLABUS

I. GENERAL PRINCIPLES

a) Route of administration.
b) Pharmacokinetics
c) Pharmacodynamics
d) Principles of therapeutics – Factors modifying drug actions.
e) Concepts of essential drugs and rational drug therapy – Pharmacovigilance and therapeutic drug monitoring, P drug concept.
f) Ethics and modalities of new drug development
g) Adverse reactions to drugs and common drug interactions.

2. DRUGS ACTING AT SYNAPTIC AND NEURO EFFECTOR JUNCTION

a) Cholinergic and anticholinergic drugs
b) Adrenergics and adrenergic blockers,

3. PERIPHERAL NERVOUS SYSTEM

a).Drugs acting at Neuromuscular Junction and autonomic ganglia.
b).Local Anaesthetics

4. DRUGS ACTING ON CENTRAL NERVOUS SYSTEM

a) General anesthetics
b) Hypno sedatives
c) Drugs and treatment of psychiatric disorders – psychosis, depression and mania.
d) Drugs in the therapy of epilepsies
e) Drugs in the therapy of migraine
f) Drugs in the central nervous system degenerative disorders
g) Opioid analgesics and antagonists
h) Drug addiction and treatment
i) Describe Drugs of Abuse (Dependence, Addiction, Stimulants, Depressants, Psychedelics, drugs used for Criminal Offences)
j) Drugs used in Parkinsonism

5. AUTOCOIDS

a) Histamine, Bradykinin, 5 HT and their antagonists
b) Lipid derived autocoids
c) Analgesic – antipyretic and anti inflammatory agents

6. DIURETICS AND OTHER AGENTS AFFECTING RENAL CONSERVATION OF WATER

7. DRUGS ACTING ON CARDIOVASCULAR SYSTEM INCLUDING BLOOD

a) Drugs used for treatment of Myocardial ischemia, heart failure
b) Anti arrhythmic drugs
c) Anti hypertensives
d) Lipid lowering drugs
e) Drug Therapy of shock
f) Hematopoietic agents (growth factors, minerals and vitamins)
g) Anticoagulants, Thrombolytic and antiplatelet drugs

8. DRUG ACTING ON RESPIRATORY SYSTEM

a) Pharmacotherapy of cough
b) Pharmacotherapy of bronchial asthma

9 . DRUGS AFFECTING GASTROINTESTINAL FUNCTION

a) Peptic ulcer
b). Drugs for emesis, reflux and digestive disorders.
c). Drugs for constipation and diarrhea.
d) Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used as below: Laxatives &, Biliary and Pancreatic Diseases.

10. CHEMOTHERAPY

a) General Principles of Chemotherapy, Rational uses of antimicrobial agents, indication for prophylactic and combined use of antimicrobials.
b) Chemotherapy of microbial diseases – Describe and discuss the rational use of antimicrobials including Antibiotic Stewardship Programme - Sulfonamides, Penicillin, cephalosporins aminoglycosides Macrolides, Tetracyclines, Quinolones, Anti Tubercular drugs, Antileprotic drugs, Antifungal drugs, Antiviral drugs.
c) Chemotherapy of parasitic infections – Antimalarial drugs, anti Amoebic drugs antihelminthics.
d) Chemotherapy of neoplastic diseases
e) Antiseptics and disinfectants

11. DERMATOLOGICAL PHARMACOLOGY

a) Describe drugs used in Skin disorders

12. ENDOCRINE PHARMACOLOGY

a) Hypothalamic and pituitary hormones.
b) Thyroid and antithyroid drugs
c) Adreno corticosteroids and their antagaonists
d) Gonadal hormones and inhibitors
e) Pancreatic hormones, and antidiabetic drugs
f) Agents that affect bone mineral homeostasis

13. MISCELLANEOUS

1) Drugs used in gout and (Rheumatoid arthritis)
2) Ocular Pharmacology
3) Therapeutic Gases
4) Drugs used for Immunomodulation
5) Vitamins & Enzymes in Therapy
6) Toxicology - Principles of toxicology and treatment of poisoning, Heavy metals and antagonists.
7) Describe Occupational and Environmental Pesticides, Food Adulterants, Pollutants and Insect repellents.
8) Describe management of common poisoning, insecticides, common sting and bites.
9) Describe and discuss Dietary supplements and Nutraceuticals.

SYLLABUS IN PRACTICAL PHARMACOLOGY

1) Prescription writing for common ailments / as per treatment guidelines by National Health Programme – Organo phosphorous poisoning, Microcytic Anaemia, Epilepsy, Insomnia, Rheumatoid Arthritis, Bronchial Asthma, Congestive Heart failure, Essential Hypertension, Lower UTI, Tuberculosis, Typhoid fever, Diabetes Mellitus, Oral Contraceptives, Peptic ulcer, Diarrhoea, etc.
2) Prescription audit / Comment, Criticize and Rewrite – CVS disorders, lower urinary infections, Typhoid fever, Tuberculosis, Malaria, HIV, Peptic ulcer, Bronchial asthma, Epilepsy, etc.
3) Patient oriented problems relating to adverse drug reactions and common drug interactions – Eg. Digoxin, Diuretics, Nitrates, Diazepam, Phenytoin, Aspirin,

Morphine, Chlorpromazine, Promethazine, Cotrimoxazole, Metronidazole, Doxycycline, Prednisolone, Insulin, OC pills, Metoclopramide , etc.

4) Experiments designed for study of effects of drugs – Chemical tests to identify drugs in biological solution, Demonstration of effect of drugs on Rabit eye, Hot plate, Analgesiometer, Photoactometer, Rotarod,
5) Critical evaluation of drug formulations – Solid dosage forms, liquid dosage form, Parenteral preparations, Drugs acting on skin and mucous membrane,
6) Dosage calculations – Bronchial Asthma, Congestive cardiac failure, Hypertension, Diabetes mellitus, Epilepsy, etc.
7) Pharmaco economic problems – UTI, Typhoid fever, Tuberculosis, Hypertension, Angina pectoris, Rheumatoid arthritis, Diabetes Mellitus, Bronchial asthma, etc.
8) Interpretation of clinical pharmacology data / GP charts – Bioavailability charts, Plasma half life, Potency chart, therapeutic drug monitoring, tachy phylaxis, etc.
9) Communicating to the patients on the proper use of medications
    a. eg. Inhalers, Venflon, IV set, vial, syringe, storage of medicines.
    b. Advice on drug administration
10) Pharmacovigilance and ADR form filling.
11) Drug Promotional Literature and its critical appraisal & Demonstrate how to optimize interaction with pharmaceutical representative to get authentic information on drugs.
12) Explain P – drugs in clinical condition.
13) Demonstration of administration of various routes of drug in mannequins.
14) Management of some common poisonings.
15) Demonstrate an understanding of the caution in prescribing drugs likely to produce dependence and recommended the line of management.
16) Motivate patients with chronic diseases to adhere to the prescribed management by the health care provide.
17) Filling up of informed consent form.

II MBBS Pharmacology

Recommended Text Books

1. Essential Medical Pharmacology by KD Tripathi.
2. Pharmacology and Pharmacotherapeutics by R.S. Satoskar
3. Clinical Pharmacology by Bennett & Brown.
4. Basic Clinical Pharmacology by Katsung.
5. Principles of Pharmacology by HL Sharma.
6. Lipincott's Illustrated Reviews Pharmacology.
7. Medical Pharmacology by Padmaja Udayakumar
8. Textbook of Pharmacology by S.D. Seth

Reference Books

1. Goodman's and Gilman's Pharmacological Basis of Therapeutics by LAURENCE BRUNTON.
2. Rang and Dale's – Text Book of Pharmacology

Academic Calendar

THEORY

Date	Exam	Theory Topics
19.06.2021	Term – I	General Pharmacology Gastrointestinal Tract & Autacoids
07.08.2021	Term – II	Central Nervous System Hormones
18.09.2021	Term – III	Blood CVS RS Chemotherapy
03.12.2021 04.12.2021	Model Exam	
15.12.2021	Medal Exam	

Date	Exam	Practical Topics
01.06.2021	Term – I	Clinical Pharmacy
02.06.2021		
10.08.2021	Term – II	Experimental Pharmacology
11.08.2021		
28.09.2021	Term – III	Clinical Pharmacology
29.09.2021		
06.12.2021	Model Exam	-
07.12.2021		
08.12.2021		
09.12.2021		

University Examination Pattern

Scheme of Examinations & Marks

S.No	Theory	Marks
1	Paper I	100
2	Paper II	100
3	Practicals	80
4	Viva or Orals	20
Total Marks		300

Minimums for Pass:

50% in Theory & Oral

50% Practical

50% in Total Marks

THEORY: Two papers of 3 hours duration and 100 marks each

Theory Question pattern - 100 Marks

Section- A 20 Marks

MCQ 20 Nos x1 Mark - 20 Marks

Section -B 80 Marks

2 Essay 15 Marks x 2 Nos - 30 Marks
5 Marks X 6 Nos. - 30 Marks
2 Marks X 10 Nos. - 20 Marks

Eligibility to appear for university exams

Internal Assessment (Theory + Practicals)	50% [Theory - minimum 40% Practicals- minimum 40%]

Criteria for pass in University exams

Theory	50% (Each Paper minimum 40%)
Practicals + Viva	50%

Syllabus for paper I and II or pharmacology subject in the II MBBS course are segregated and furnished as mentioned below:

Paper I:

1. General Pharmacology, CNS
2. Chemotherapy, GIT

Paper II:

3. ANS, CVS including Blood & Diuretics
4. Respiratory system, Endocrines, Autacoids and their antagonists and Miscellaneous.

PRACTICAL

Practical Marks – 100

(Practical - 80 marks + Viva – 20 marks) (Total 3 Hours)

1.	Clinical Pharmacy	20 Marks
2.	Clinical Pharmacology	30 Marks
3.	Experimental Pharmacology (OSPE)	20 Marks
4.	Communication (OSPE)	10 Marks
5.	Viva	20 Marks
	TOTAL	**100 Marks**

Internal Assessment

I - IA Exam (June)			II - IA Exam (August)			III - IA Exam (October)			Model Exam (December)			Grand Total
Theory	Practical	Total	Theory	Practical	Total	Theory	Practical	Total	Theory	Practical	Total	
100	100	200	100	100	200	100	100	200	100	100	200	800

Theory = 400 Marks

Practicals = 400 Marks

- There will be 3 Internal Assessment examinations in Pharmacology.
- It is mandatory for the students to appear for all the Internal Assessment Examinations.
- There will be only one additional examination for absent students.
- Internal Assessment marks for theory will be out of 400 and practical will be out of 400.
- Reduce total theory Internal Assessment to 40 marks and total practical Internal Assessment to 40 marks. Students must secure at least 50 % marks of the total marks (combined in theory and practical, not less than 40 % marks in theory and practical separately) to be eligible for appearing University Examination.
- Conversion formula for calculation of marks in Internal Assessment examinations.

	I - IA	II - IA	III - IA (Prelim)	Model Exam	Total	IA marks : Conversion formula (out of 40)	Eligibility to appear for final University examination (after conversion out of 40) (40% separately in Theory & Practical, 50 % combined)	
Theory	100	100	100	100	400	Total Marks obtained - 10	16 (Minimum)	Total of Theory + Practical must be 40
Practical	100	100	100	100	400	Total Marks obtained – 10	16 (Minimum)	

- Internal Assessment marks will not to be added to the University Examinations and will be shown in separate mark list.

Department of Pharmacology

University Practical Mark Distribution

Practical Marks - 100 Marks (Total – 3 hours)

Practical - 80 Marks

Viva - 20 Marks

Practicals - 80 Marks

1. Clinical Pharmacy - 20 marks
   a. Dosage form - 5 marks
   b. ORS preparation / Starting of a IV Drip - 5 marks
   c. Dosage calculation - 5 marks
   d. Spotters - 5 marks

2. Clinical Pharmacology - 30 marks
   a. Prescription writing - 10 marks
   b. CCR (Audit) - 10 marks
   c. ADR Reporting - 05 marks
   d. Critical Evaluation of drug promotional literature - 05 marks

3. Experimental Pharmacology - 20 marks
   a. Drug administration Using maniquin - 10 marks
   b. ANS chart - 10 marks

4. Communication (OSPE) - 10 marks
   a. Prescription communication (or)
   b. Optimal use of drugs / devices / storage of medicine

Viva - 20 Marks

Grand Total - 100 Marks

Blue Print of Question Pattern

PAPER –I						
SL.No	**Topics**	**No. of ESSAY 30 Marks (2x15marks)**	**No. of SEQ 30 Marks (6x5marks)**	**No. of SAQ 20 Marks (10x2marks)**	**No. of MCQ 20 Marks (20x1marks)**	**Total 100 Marks Distribution**
1.	General Pharmacology	*	2	4	5	23
2.	Central Nervous System & Local Anesthetics, Drug acting at Neuromuscular Junction and autonomic ganglia	1	1	2	6	30
3.	Chemotherapy	1	2	2	5	34
4.	Gastro Intestinal Tract	*	1	2	4	13
	Paper I - Total Marks	30	30	20	20	100

Note: SEQ - Short Essay Question.
SAQ - Short Answer Question.
MCQ - Multiple Choice Question.
Essay can be asked from other systems but system wise mark distribution may be maintenances

PAPER-II						
SL. No	**Topics**	**No.of ESSAY (30 Marks) (2x15marks)**	**No. of SEQ (30 Marks) (6x5marks)**	**No. of SAQ (20 Marks) (10x2Marks)**	**No. of MCQ (15 Marks) (15x1marks)**	**Total 100 Marks Distribution**
1.	Autonomic Nervous system	*	1	3	4	15
2.	Cardio vascular system & Diuretics	1	1	1	5	27
3.	Blood	*	1	2	3	12
4.	Respiratory system	*	1	2	2	11
5.	Endocrines	1	1	1	3	25
6.	Miscellaneous 1.Therapeutic Gases 2.Drugs used for Immunomodulation 3. Vitamins & Enzymes in Therapy 4.Toxicology - Principles of toxicology and treatment of poisoning, Heavy metals and antagonists	*	1	1	3	10
Paper II - Total Marks		30	30	20	20	100

Note: SEQ - Short Essay Question
SAQ - Short Answer Question.
MCQ - Multiple Choice Question
Essay can be asked from other systems but system wise mark distribution may be maintained.

PAPER - I

I: ESSAYS TO BE ASKED FROM THE FOLLOWING TOPICS:

1. Central Nervous System & Local Anesthetics, Drug acting at Neuromuscular Junction and autonomic ganglia.
2. Chemotherapy.

II: 5 MARKS QUESTIONS CAN BE ASKED FROM

1. General Pharmacology
2. Central Nervous System & Local Anesthetics, Drug acting at Neuromuscular Junction and autonomic ganglia.
3. Chemotherapy
4. Gastro Intestinal Tract

III : 2 MARKS QUESTIONS CAN BE ASKED FROM ALL THE TOPICS

IV:MCQ CAN BE ASKED FROM ALL THE TOPICS

PAPER - II

I: ESSAYS TO BE ASKED FROM THE FOLLOWING TOPICS:

1. Cardio vascular system & Diuretics
2. Endocrines

II: 5 MARKS QUESTIONS CAN BE ASKED FROM

1. Autonomic Nervous system
2. Cardio vascular system & Diuretics
3. Blood
4. Respiratory system
5. Endocrines
6. Miscellaneous

III : 2 MARKS QUESTIONS CAN BE ASKED FROM ALL THE TOPICS

IV: MCQ CAN BE ASKED FROM ALL THE TOPICS

INSTRUCTION TO THE STUDENTS

I. LECTURE CLASSES:

- Students are instructed to keep a separate long size assignment exclusively for Pharmacology
- They are instructed to take class notes in regular manner.
- The lecture class notes will be verified during the practical hours.

II. TUTORIAL CLASSES (GROUP TEACHING):

- Tutorial classes will be conducted each week during the first lecture class.
- Students are instructed to read the previous week lecture topics and come prepared for the tutorial viva Group discussion.
- Student should write down the short answer for the questions in the assignment note book after the Tutorial /Group discussion class.
- The notebook will be checked by the teachers in the practical class.

III. PRACTICAL CLASSES:

- Students will not be allowed to the practical class without wearing apron, Record note and observation note. They have to write the practical class notes and observation in observation note.
- Previous class's practical exercise and the observations and interpretation of results should be written in the record note book before entering the practical class, if not,½ mark will be detected in Record marks, for each late submission.

IV. INTERNAL ASSESSMENT EXAMINATION:

- Internal assessment examination will be conducted every third month both theory and practicals.
- Final IA marks will be given entirely on the basis of IA exam marks conducted during the entire course.
- IA exam progress report will be sent to the parents.

V. ATTENDANCE:

- Regular attendance is compulsory.
- Leave letter sanctioned by the Dean should be submitted before going on leave.
- Attendance percentage and IA marks will be sent to the parents periodically.
- Students with less than 80% attendance and less than 50 % of IA marks will not be allowed to appear for the university exams.
- Attendance will be considered for IA Record marks.

Vinayaka Mission's Kirupananda Variyar Medical College & Hospitals, Salem – 636308.
ACADEMIC CALENDER April 2021 – December 2021

Date	Events for April 2021	Events for May 2021	Events for June 2021
1		**May Day - Holiday**	**Pharmacology - IA Practical exam I**
2		**Sunday**	**Pharmacology - IA Practical exam I**
3			
4	**Sunday**		
5		**Microbiology - IA Theory exam I**	**Pathology - IA Theory exam I**
6		**World Asthma Day**	**Sunday** **World Malaria Day**
7	**World Health Day**		
8		**World Red Cross Day**	
9		**Sunday** **World Thalassemia Day**	
10			
11	**Sunday**		
12		**Microbiology - IA Practical exam I**	
13		**Microbiology - IA Practical exam I**	**Sunday**
14	**Tamil New Year – Holiday**		**World Blood Donation Day**
15			**Pathology - IA Practical exam I**
16		**Sunday**	
17			**Pathology - IA Practical exam I** **PTA Meeting - I**
18	**Sunday**		**PTA Meeting - I**

19			**Pharmacology - IA Theory exam I**
20			**Sunday**
21			
22			
23		**Sunday**	
24			
25	**Sunday**		
26			
27			**Sunday**
28			
29			
30		**Sunday**	
31	-		-

Date	Events for July 2021	Events for August 2021	Events for September 2021
1	**National Doctor's Day**	**Sunday**	
2			
3	**Microbiology - IA Theory exam II**		
4	**Sunday**		**Pathology - IA Theory exam III**
5			**Sunday** **Teacher's Day**
6			
7	**Microbiology - IA Practical exam II**	**Pharmacology - IA Theory exam II**	**Pathology - IA Practical exam III**
8	**Microbiology - IA Practical exam II**	**Sunday**	
9			**Pathology - IA Practical exam III**
10	**Saturday**	**Pharmacology - IA Practical exam II**	
11	**Sunday**	**Pharmacology - IA Practical exam II**	
12			**Sunday**
13			
14		**Saturday**	
15		**Sunday** **Independence Day - Holiday**	
16			
17	**Pathology - IA Theory exam II**		
18	**Sunday**		**Pharmacology - IA Theory exam III**
19			**Sunday**
20		Mentorship Programme	

21		**Microbiology - IA Theory exam III**	
22		**Sunday**	
23			
24	**Saturday**		
25	**Sunday**	**Microbiology - IA Practical exam III**	**Saturday**
26		**Microbiology - IA Practical exam III**	**Sunday**
27	**Pathology - IA Practical exam II**		
28		**Saturday**	
29	**Pathology - IA Practical exam II**	**Sunday**	
30			
31	**Saturday**		-

Date	Events for October 2021	Events for November 2021	Events for December 2021
1			**World AIDS Day** **Pathology – Model Theory exam Paper I**
2	Gandhi Jayanthi - Holiday		**Pathology – Model Theory exam Paper II**
3	**Sunday**		**Pharmacology – Model Theory exam Paper I**
4	**PTA Meeting - II**		**Pharmacology – Model Theory exam Paper II**
5	**PTA Meeting - II**		**Sunday**
6	**Microbiology - IA Theory exam IV**	**Pharmacology - IA Practical exam**	**Model Practical exam – all departments**
7		**Sunday**	**Model Practical exam – all departments**
8			**Model Practical exam – all departments**
9			**Model Practical exam – all departments**
10	**Sunday** World Mental Health Day	**World Immunisation Day**	
11			
12	**World Arthritis Day**		**Sunday**
13		**Saturday**	**Microbiology - Medal exam / Slow learners – all departments**

14		**Sunday**	**Pathology - Medal exam / Slow learners – all departments**
15			**Pharmacology - Medal exam / Slow learners – all departments**
16	**Pathology - IA Theory exam IV**		
17	**Sunday**		
18			
19			**Sunday**
20	**World Osteoporosis Day**		
21	**World Iodine Deficiency Day**	**Sunday**	
22			
23	**Saturday**		
24	**Sunday** **World Polio Day**		
25			**Saturday** **Christmas - Holiday**
26	**Pharmacology - IA Practical exam III**		**Sunday**
27	**Pharmacology - IA Practical exam III**	**Saturday**	
28		**Sunday**	
29		**Microbiology – Model Theory exam Paper I**	
30	**Saturday** **Pharmacology - IA Practical exam**	**Microbiology – Model Theory exam Paper II**	
31	**Sunday**		