



# Curricula for M.B.B.S. Final (Part-II) Professional Examination

## MEDICINE

(i) **GOAL:**

The broad goal of the teaching of undergraduate students in Medicine is to have the knowledge, skills and behavioral attributes to function effectively as the first contact physician.

(ii) **OBJECTIVES:**

(a) **KNOWLEDGE:**

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

- (1) Diagnose common clinical disorders with special reference to infectious diseases, nutritional disorders, tropical and environmental diseases;
- (2) Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interactions, indications and contra-indications;
- (3) Propose diagnostic and investigative procedures and ability to interpret them;
- (4) Provide first level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required;
- (5) Recognize geriatric disorders and their management.

(iii) **SKILLS :**

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

- (1) develop clinical skills (history taking, clinical examination and other instruments of examination to diagnose various common medical disorders and emergencies;
- (2) refer a patient to secondary and/or tertiary level of health care after having instituted primary care;

(3) perform simple routine investigations like hemogram, stool, urine, sputum and biological fluid examinations;

(4) assist the common bedside investigative procedures like pleural tap, lumbar puncture, bone marrow aspiration/ biopsy and liver biopsy.

A course of systematic instruction in the principles and practice of medicine, including medical disease of infancy;

a. Lecture - demonstrations, seminars and conferences in clinical medicine during the 3 years shall run concurrently with other clinical subjects.;

b. Instructions in comprehensive medical care;

c. Instructions in applied anatomy and physiology and pathology throughout the period of clinical studies;

d. Instructions in dietetics, nutrition and principles of nursing Medical and in simple ward procedure e.g. should be imparted during clinical concurrently.

iv) **Attitude :**

a. The teaching and training in clinical medicine must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.

b. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes.

c. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

**Curriculum for Theory Lecture series & Tutorials and LCD for General Medicine including Psychiatry, Tb. & Dermatology**

TERM	DAY	TIME	LECTURES	TOPIC
4th	MON	8-9	20	Introduction to Medicine
5th	MON	8-9	15	Infectious Diseases/Tropical diseases Cardiovascular System
	FRI	8-9	15	
6th	TUE	12-1	20	GIT, Liver, Pan. Chest + Miscellaneous TB Psychiatry Skin
	THU	8-9	20	
	MON	8-9	20	
	TUE	8-9	20	
	SAT	8-9	15	

7th	FRI THU FRI MON	8-9 12-1 2-4 2-3	15 15 30 20	Neurology Haematology/Haemato- oncology Tutorials Skin / STD
8th	TUE THU TUE  WED	8-9 8-9 2-4  2-4	20 20 40  40	Endo + Misc + Genetics ( 3 Lectures.) Nephro. +Clinical Nutrition Tutorial Medicine, Skin, Tb, Psychiatry,  Tutorial
9th	TUE MON	12-1 2-4	15 30	LCD Medicine (10 ) Skin 1 Psychiatry (1) Tb(1) LCD Medicine (7)

The above timetable is general outline to guide the planning of curriculum at college level. However, flexibility may be exercised to the extent that there may be minor re-scheduling of course contents day-wise or term-wise. It must be ascertained that the course contents are covered fully and total hours allotted for the subjects are effectively implemented.

Note :- These are suggested time tables. Adjustments where required, depending upon the availability of time and facility, be made.

### SYLLABUS

(General Instruction: 1) **The Lectures** Stated below shall cover knowledge about applied aspects of basic & allied sciences, practical approaches in the management of patients in the outdoor & indoor settings as well as their management in the community. Special emphasis shall be placed on preventive aspects, National Health Programs & dietetics & nutrition.)

2) **During practical teaching & training in wards**, OPD & field works proper emphasis should be given to common health problems in addition to other diseases. Emphasis should be given to learning of tacit knowledge & skills in diagnosis & interpretation of finding & Lab. data.

### INTRODUCTION TO MEDICINE : 4 TH SEMESER

Lect.01. : History of Medicine.

Lect.2/3. : Concept & objectives of history taking. Diagnosis, Provisional Diagnosis, Differential diagnosis.

Lect.04. : Symptomatology of Cardiovascular Diseases.

Lect.05. : Symptomatology of Respiratory diseases.

Lect.06. : Symptomatology in Nervous system.

Lect.07. : Symptomatology in Gastrointestinal and Hepatobiliary diseases.

Lect.08. : Approach towards a patient with Fever / Oedema.

Lect.09. : Approach towards a patient with anaemia / jaundice.

Lect.10. : Approach towards a patient with Lymphadenopathy.

Lect.11. : Investigations ( Non- Invasive ) X-rays, USG ,C.T. / M.R.I. Scan, Secretions examinations, Peripheral smear

Lect.12.: Investigations ( Invasive ) Bone marrow, F.N.A.C. Liver biopsy, Lymph node biopsy Endoscopies Lumber puncture.

Lect.13/14.: Review of common diseases in India.

Lect.15/16,: Revision.

Lect.17.: Examination.

Lect.18/20: Buffer.

### **INFECTIOUS DISEASES : 5 TH SEMESTER**

Lect.01:Introduction.

Infections – types, Modes of Infection transmission, Incubation period Host defenses, Immunity & Immunization & Management including Prevention

Lect.02 : Viral hepatitis.

Lect.3/4/5: Tetanus/ Diphtheria

Lect.6/7: Malaria

Lect.08: Rabies

Lect.09: Typhoid fever

Lect.10/11: Gastroenteritis

Lect.12: Plague / Dengue

Lect.13/14: ( HIV ) Infection & AIDs.

Lect.15.: Examination.

Note :- The course contents in above topics should also cover applied aspects in basic sciences like Anatomy, Physiology, Bio-Chemistry, Micro- Biology, Pharmacology, Pathology, FMT

while giving training on Clinical features, investigations, Diagnosis, D/D treatment & prevention.

## **CARDIOVASCULAR SYSTEM : 5 TH SEMESTER**

Lect.01 : Introduction

Functions / anatomy / physiology and its applications

Various terminologies used

Lect.2/3: Methods of evaluation Non - invasive Invasive

Lect.04 : Arrhythmias Concept & Classification ,Presentation Diagnosis Pharmacotherapy in short

Lect.05: Cardiac arrest.

Lect.06: C.C.F. Types Presentations Pathophysiology Management

Lect.07: C.H.D. Aetiology and classification CHD in adults & its importance

Lect.08: Rheumatic fever

Lect.09: Presentation and haemodynamics of various Valvular lesions including investigations, Diagnosis, D/D treatment & Prevention.

Lect.10: Infective endocarditis

Lect.11/12: C.A.D, (Coronary artery disease)

Lect.13: Pericardial diseases and cardiomyopathy

Lect.14: Hypertension

Lect.15: Examination.

## **GASTROENTEROLOGY, HEPATOBILIARY SYSTEM & PANCREAS : 6 TH SEMESTER**

Lect.01: Introduction to GIT Oral Cavity Ulcers Bleeding Pigmentation, Oral manifestation of systemic diseases

Lect.2/3: Oesophagus

Inflammation, Dysphagia

Lect.4/5: Stomach Peptic ulcers Aetiopathogenesis Clinical features Investigations D/D and management

Acute and Chronic gastritis

Lect.6/7. Small and large intestine diseases

Secretions & functions

MAS Mal –absorption-syndrome

Tuberculosis of Abdomen

Lect.08: Ulcerative colitis & Crohn’s disease

Lect.09: Liver.

Introduction

LFT & their interpretation

Lect.10/11: Hepatitis - Acute & Chronic

Lect.12/13: Cirrhosis of liver

Lect.14: Gall bladder diseases

Lect. 15/16: Pancreas Functions Investigations

Acute and Chronic pancreatitis

Manifestation and D/D & treatment.

Lect.17/18: Misc. & Revision.

Lect.19: Examination.

## **RESPIRATORY SYSTEM : 6 TH SEMESTER**

Lect.01: Applied Anatomy and physiology of R.S.

Lect.02: P.F.T. ( Pulmonary Function Testing)

Lect.03: Resp. Infection- Pneumonias.

Lect.04: Chronic bronchitis and emphysema

Lect.5/6: Bronchiectasis and lung abscess.

Lect.07: Bronchial asthma

Lect.08: Malignancies

Lect.09: Mediastinum and its disorders.

Lect.10: Pleural disease - Emphasis on pneumothorax

Lect.11: Pleural effusion.

Lect.12: Occupational lung disease. Its concept and short review

Lect.13: Revision - Fungal & Parasitic diseases

Lect. 14:Respiratory emergencies & Introduction to mechanical ventilators

## **Collagen Vascular Disorders**

Lect.1: Allergy - Concept & hypersensitivity, Autoimmunity

Lect.2: Collagen disease.

Lect.3: Rheumatoid arthritis

Lect.4: Sero negative arthritis

Lect.5: Revision HIV , Alcohol related disease

Lect.6: Examination

## **TUBERCULOSIS : 6 TH SEMESTER**

Lect.01: History and introduction

Lect.2/3: Pathogenesis and pathology

Lect.04: Role of host related factors

Lect.05: Microbiology of AFB

Lect.06: Clinical features of pulmonary tuberculosis and its investigations

Lect.07: Anti – Tubercular drugs

Pharmacology & Schedules of treatment.

Lect.8/9: Resistant tuberculosis

DOTS

Prophylaxis - Drugs /BCG/ Tuberculin test. HIV & TB.

Lect.10: Extra - pulmonary tuberculosis

Plural effusion Empyema Others

Lect.11/12: Revision

Lect.13: Examination

## **NEUROLOGY: 7 TH SEMESTERS**

Lect.01: Introduction

Applied anatomy & physiology

History taking in neurology

Lect.02: Investigations

Lect.3/4: CVD ( Cerebro Vasular Disease) Types & its differential diagnosis Predisposing factors

Diagnosis and management

Lect.05: S.O.L. (Space Occupying Lesions)

Lect.06: Encephalitis and meningitis

Lect.07: Epilepsy

Lect.08: Cerebellar syndrome

Lect.09: Parkinsonism

Lect.10: Paripheral neuropathy

Lect.11: Muscle disorders in brief

Lect.12/13: Spinal cord disorders

Lect.14: CSF Formation and absorpion Status in various disorders

Lect.15: Examination.

### **HEMATOLOGY: 7 TH SEMESTER**

Lect.01: Introduction

Cell line of hemopoisis

Stimulating factors

Physiology and Anatomy of RBCs.

Lect.02: Anemias Introduction Classification

Symptoms & signs in general

Basic investigations & its interpretation

Lect.03: Microcytic hypochromic anaemias

Fe Kinetics

C/F, investigations of Fe deficiency. Treatment of Fe deficiency.

D/D - Sideroblastic / thallasemic.

Lect. 04: Macrocytic anaemias

Kinetics of B-12 and Folic acid

C/F, investigations and management of B-12 / FA deficiency.

Lect.05: Anaemias (continued)

Brief of Chronic infections and inflammation

Hemolytic anaemias



Lect.06: Hemoglobinopathies

Lect.07: Hypoplastic / Aplastic anemia

Definition

Classification

Diagnosis and management

Lect.08: Introduction to WBCs.

Agranulocytosis - Aetiology & its significance

Leukemias ( AML, ALL, CML, CLL)

Lect.09: Management of leukemia

Lect.10: Lymphomas

Hodgkin's disease / NHL (Non-Hodgkin's lymphoma)

Lect.11: Approach to a patient with bleeding disorders

Recognition Investigations Physiology of Platelets Therapy

Lect.12: Blood groups & Blood Transfusion & Component Therapy

Lect.13-14: Revision

Lect. 15: Examination.

## **ENDOCRINOLOGY : 8 TH SEMESTER**

Lect. 01: Introduction - Hormones

Concept Types Action

Endocrine system

General

Control

Lect.2/3: Pituitary Anatomy Regulation

Disorders of Ant. Pituitary

Acromegaly

A.G. Syndrome

Disorders of Post. Pituitary

Hypopituitarism

Lect.4/5: Thyroid Anatomy Regulation

Goiter

Hypothyroid state & hyperthyroid state

Classifications

Management

Lect.6/7: Adrenal gland Anatomy Regulation

Addison's & Cushing syndrome

Recognition Investigations Management Pheocromocytoma

Lect.08: Vit. D. Metabolism.

Ca. Metabolism and its relations to parathyroid

Diagnosis & management of related disorders.

Lect.9/10: Diabetes Mellitus

Lect.11: FSH < H. Oestrogens Progesterone's

Significance

Disorders

Its recognition and diagnosis

Management

Lect.12: Multiple endocrine-syndrome and paraneoplastic syndrome Overview.

Diabetes incipidus.

**Miscellaneous**

Lect.13/14 : Poisoning

Suicidal / Homicidal / Accidental

Chemical / Biological / Corrosives / Drugs

Concepts of management Optimum Barbiturate DDT

Organophosphorus

Lect.15: Hyperpyrexia and Heat exhaustion

Aetiology Pathophysiology C / F. Types Management

Preventive measures

Lect.16 : Electrical injury Types Manifestations Management Lightning

Lect.17: Shock

Types

Pathophysiology / Complications Management

Lect.18/19: Revision

Lect.20: Examination

## **NEPHROLOGY, NUTRITION : 8 TH SEMESTER**

### **NEPHROLOGY :**

Lect.01: Anatomy & Physiology of Urinary system

Lect.02: R.F.T. ( Renal Function Tests)

Lect.03: Acute Glomerulonephropathy

Lect.04: Chronic Glomerulonephropathy

Lect.05: Infections of urinary system.

Lect.06: Nephrotic syndrome

Lect.07: Approach towards common problem

i. Proteinuria ii. Hematuria

iii. Renal colics

Lect.08: Acute & Chronic renal failure

Lect.09: Dialysis - Diet - Drugs. In renal failure

Lect.10:Revision

Lect.11: Examination

### **Genetics (3 lectures )**

Lect.1 : Introduction

Lect.2 : Common genetic disorders

Lect.3 : Application of Genetic Engineering in Medicine

### **NUTRITION :**

Lect.11: Concepts of carbohydrate, proteins, fats, vitamins and minerals. Balanced diet.

Lect.12: Protein energy malnutrition.

Lect.13/14: Vitamin deficiency state

Scurvy / Beribery / Pellegra / Vit.A

Lect.15: Obesity / Asthenia

Diagnosis

“Complications and management

Lect.16: Revision

Lect.17: Examination.

Introduction of “ Brain Death and Organ Donation” topic in subjects of Physiology , Preventive & Social Medicine, Psychiatry, Medicine & Surgery

**Recommended Books:**

1. Hutchinson’s Clinical Methods by Hunter and Bomford,
2. The Principles and practise of Medicine - Sir Stanley Davidson
3. Text book of Medical Treatment - Dunlop and Alstead.
4. Savill’s system of Clinical Medicine - E. C. Warner.
5. Principles of internal Medicine - Harrison.
6. API Text Book of Medicine.
7. **Reference Book (Clinical Medicine) : "Clinical Examination in Medicine": Author: Dr. A. P. Jain**
8. **“Manual of Clinical Practical Medicine” : 1) Dr. G.S.Sainani  
2) Dr. V.R. Joshi  
3) Dr. Rajesh G. Sainani**

*SKIN*

*DERMATOLOGY / STD/ LEPROSY*

**Goals :**

The aim of teaching the Under graduate students in Dermatology, S.T.D. and Leprosy is to impart such knowledge and skills that may enable him to diagnose and treat common ailments and to refer rare diseases or complications and unusual manifestations of common diseases to the specialist.

**OBJECTIVES : Knowledge :**

At the end of the course of Dermatology, Sexually Transmitted Diseases & Leprosy the student shall be able to :

1. Demonstrate sound knowledge of common diseases, their clinical manifestations including emergent situations and of investigative procedures to confirm their diagnosis.
2. Demonstrate comparative knowledge of various modes of topical therapy.
3. Demonstrate the mode of action of commonly used drugs, their doses, side effects / toxicity, indications and contraindication & interactions.
4. Describe commonly used modes of management including the medical & Surgical procedures available for the treatment of various diseases and to offer a comparative plan of management for a given disorder.

**Skills :**

The student shall be able to

1. Interview the patient, elicit relevant and correct information and describe the history in a chronological order :
2. conduct clinical examination, elicit and interpret physical findings and diagnose common disorders and emergencies :
3. perform simple, routine investigative and laboratory procedures required for making the bed-side diagnosis, especially the examination of scrapings for fungus, preparation of slit smears and staining for AFB for leprosy patients and for STD cases :
4. take a skin biopsy for diagnostic purposes ;
5. Manage common diseases recognizing the need for referral for specialized care, in case of inappropriateness of therapeutic response.

Structures and functions of Skin and its appendages

Pruritus

Infections (Bacterial , Chlamidia, Mycoplasma, Fungal & Viral ) Infestations ( Ecto and Endoparasites)

Nutritional disorders Allergic Disorders Leprosy

STD

HIV & Skin Papulesquamous disorders Collagen Vascular Disorders

Pigmentary disorder

Drug reactions.

## **CHEST**

### **TUBERCULOSIS AND RESPIRATORY DISEASES:**

**(i) GOAL :**

The aim of teaching the undergraduate student in Tuberculosis and Chest Diseases is to impart such knowledge and skills that may enable him/her to diagnose and manage common ailments affecting the chest with the special emphasis on management and prevention of Tuberculosis and especially National Tuberculosis control programme.

**(ii) OBJECTIVES :****(a) KNOWLEDGE :**

At the end of the course of Tuberculosis and Chest diseases, the student shall be able to:

- 1) demonstrate sound knowledge of common chest diseases, their clinical manifestations, including emergent situations and of investigative procedures to confirm their diagnosis“
- 2) demonstrate comprehensive knowledge of various modes of therapy used in treatment of respiratory diseases;
- 3) describe the mode of action of commonly used drugs, their doses, side- effects/toxicity, indications and contra-indications and interactions.;
- 4) describe commonly used modes of management including medical and surgical procedures available for treatment of various diseases and to offer a comprehensive plan of management inclusive of National Tuberculosis Control Programme.

(b) **SKILLS :**

The student shall be able to :

- 1) interview the patient, elicit relevant and correct information and describe the history in chronological order;
- 2) conduct clinical examination, elicit and interpret clinical findings and diagnose common respiratory disorders and emergencies;
- 3) perform simple, routine investigative and office procedures required for making the bed side diagnosis, especially sputum collection and examination for etiologic organisms especially Acid Fast Bacilli (AFB), interpretation of the chest x-rays and respiratory function tests;
- 4) interpret and manage various blood gases and PH abnormalities in various respiratory diseases.
- 5) Manage common diseases recognizing need for referral for specialized care, in case of inappropriateness of therapeutic response;
- 6) Assist in the performance of common procedures, like laryngoscopic examination, pleural aspiration, respiratory physiotherapy, laryngeal intubation and pneumo-thoracic drainage/aspiration

(c) **INTEGRATION:**

The broad goal of effective teaching can be obtained through integration with departments of Medicine, Surgery, Microbiology, Pathology, Pharmacology and Preventive and Social Medicine  
Lect. 01 : History and introduction.

Lect. 2/3: Pathogenesis and pathology

Lect. 04: Role of host related factors.

Lect. 05: Microbiology of AFB

Lect. 06: Clinical features of pulmonary tuberculosis

Lect. 07: Anti-tuberculous drugs

-Pharmacology & schedules of drug therapy

Lect. 8/9: Resistant tuberculosis

DOTS

Prophylaxis - Drugs / BCG / Tuberculin test. HIV & TB

Lect 10 Extra - Pulmonary tuberculosis

Pleural Effusion

Others.

Lect 11/ 12: Revision

Lect. 13: Examination.

### **Respiratory System :**

1. Applied anatomy & Physiology of R.S.
2. Lung function tests
3. Respiratory infections, pneumonias, fungus,
4. Bronchiectasis & lung Abscess.
5. Bronchial Asthma.
6. Lung & Pleural Malignancies.
7. Mediastinum & its disorders.
8. Pleural Diseases
9. Occupational Lung Disease
10. Respiratory emergencies.

### **Lecture cum Demos ( Resp system)**

1. Lung function test and blood gas Analysis and Resp. alkalosis & Acidosis.
2. Chest bronchios emphysema
3. Suppurative lung diseases
4. Bronchogenic carcinoma & other malignancies with Mediastinal obstruction
5. Pleural disease - pneumothorax, pyopneumothorax, Pleural

L.C.D. In T.B.

1. Haemoptysis
2. Drug resistance
3. TB & HIV

## **PSYCHIATRY**

### **(i) GOAL :**

The aim of teaching of the undergraduate student in Psychiatry is to impart such knowledge and skills that may enable him to diagnose and treat common Psychiatric disorders, handle Psychiatric emergencies and to refer complications/unusual manifestation of common disorders and rare Psychiatric disorders to the specialist.

### **(ii) OBJECTIVES :**

#### **(a) KNOWLEDGE :**

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

1. comprehensive nature and development of different aspects of normal human behaviour like learning, memory, motivation, personality and intelligence;
2. recognize differences between normal and abnormal behaviour;
3. classify psychiatric disorders;
4. recognize clinical manifestations of the following common syndromes and plan their appropriate management of organic psychosis, functional psychosis, schizophrenia, affective disorders, neurotic disorders, personality disorders, psychophysiological disorders, drug and alcohol dependence, psychiatric disorders of childhood and adolescence;
5. describe rational use of different modes of therapy in psychiatric disorders.

#### **(b) SKILLS :**

The Student shall be able to :

- 1) interview the patient and understand different methods of communications in patient-doctor relationship;
- 2) Elicit detailed psychiatric case history and conduct clinical examination for assessment of mental status;
- 3) Define, elicit and interpret psycho-pathological symptoms and signs;
- 4) Diagnose and manage common psychiatric disorders;



5) Identify and manage psychological reactions and psychiatric disorders in medical and surgical patients in clinical practice and in community setting.

**(c) INTEGRATION :**

Training in Psychiatry shall prepare the students to deliver preventive, promotive, curative and re-habilitative services for the care of patients both in the family and community and to refer advanced cases for a specialized Psychiatry / Mental Hospital. Training should be integrated with the departments of Medicine, Neuro-Anatomy, Behavioral and Forensic Medicine.

**4th or 5th semester 5 lectures**

2. Motivation (including frustration, conflicts etc.) Emotion (including mind- body relationship)
3. Learning (different types) memory ( Types of memory, cause of forgetting etc.)
4. Intelligence, emotional Quotient including M.R. and sifted child.
5. Personality-Different types with mental mechanisms
6. Difference between normal and abnormal behaviour. Doctor-Patient relationship and communication skills

**In 8th & 9th Semester remaining 15 lectures.**

1. Psychiatric classification. Difference between functional and organic psychosis. Difference between psychosis and neurosis.
2. Schizophrenia including drugs and rehabilitation.
3. Affective disorders including pharmacotherapy
4. Affective disorders including non-pharmacotherapy treatment.
5. Anxiety disorders-Generalised anxiety, disorders, panic disorders.
6. O.K.D. and Phobias.
7. Somatoform disorders.
8. Alcohol dependence
9. Psycho-Physiological disorders.
10. Scholastic problems.
11. Behavioural disorders.
12. Sexual disorders.
13. Psychiatric emergencies including suicide and organic brain disorders.
14. Psychotherapies including behavior therapy.

## **UNIVERSITY EXAMINATIONS SCHEME**

### **MEDICINE:-**

Theory 2 papers of 60 marks each = 120 marks

**Paper I** - General Medicine shall contain questions from: Cardiovascular System, Respiratory System, Gastrointestinal System, Neurological Diseases, Poisons, Occupational Hazards, Immune System, Connective Tissue & Joints, Oncology & Hematology

**Paper II** - General Medicine shall contain questions from: Genetics & Diseases, Nutrition & Infectious Diseases, Endocrinology & Metabolism, Kidney & Urinary Tract, Psychiatry, Dermatology, Sexually transmitted Diseases

**Oral (viva)** interpretation of X-Ray, ECG etc. = 20 marks

**Clinical (Bedside)** = 100 marks

**Internal Assessment** = 60 marks (Theory 30 Marks, Practical 30 Marks)

**Grand Total** = 300 marks

- These are the broad division of topics to cover the whole syllabus. There are chances of overlapping of topics in both papers, students must be prepared accordingly. No claim of overlapping questions shall be entertained by the university

### **Criteria of passing**

SN	Subject	Theory Paper ./ Oral/ Practical / Internal Assessment		Maximum Marks in each of the subject	Minimum marks required to pass in each part of any subject	Minimum marks required to pass in each subject out of
	General Medicine	a) Theory	Paper I	60	70	150/300
			Paper II	60		
		b ) Oral	20			
		c) Practical	100	50		
		d) Internal Assessment	Theory	30	30	
	Practical		30			

Passing: A candidate must obtain 50% in aggregate with a minimum of 50% in Theory including oral and minimum of 50% in practical's

## NATURE OF THEORY QUESTION PAPERS:

Pattern of Theory Examination including Distribution of Marks, Questions, Time.

**Faculty with Year: MBBS Final Part-II**

**Subject: General Medicine**

**Paper: I**

**Total Marks: 60 Time: 3 Hours**

### Instructions:

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.
- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3 and 4 time duration is 2.30 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- 10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

Question No.	Question Description	Division of Marks	Total Marks
<b>1</b>	Total MCQs : 20	<b>20 X1/2</b>	<b>10</b>
<b>2</b>	Long answer question four a) b) c) d)	<b>4 X5</b>	<b>20</b>
<b>3</b>	short answer questions four a) b) c) d)	<b>4X3</b>	<b>12</b>
<b>4</b>	very short answer questions nine a) b) c) d) e) f) g) h)i)	<b>9 X 2</b>	<b>18</b>

**Faculty with Year: MBBS Final Part-II**

**Subject: General Medicine**

**Paper: II**

**Total Marks: 60 Time: 3 Hours**

### Instructions:

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.
- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3 and 4 time duration is 2.30 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- 10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

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<b>4</b>	very short answer questions nine a) b) c) d) e) f) g) h)i)	<b>9 X 2</b>	<b>18</b>

## **Final University Exam : Practical Exam :**

Shall comprise of total 120 marks with divisions as below :-

(A) Clinical Bed side:

One Long case - 50 Marks: The time for case taking for student is 45 min. & for examination is 10 min.

Two short cases - 25 Marks each: The time for case taking for student is 10 min. & for examination is 5 min.

Total - 100 Marks

(B) Oral Viva Voce and interpretation of investigation materials (like X-Rays, ECGs, etc. – 20 marks

Viva at Two Tables Each for 10 marks.

There should be even & balanced distribution of the course contents on these tables, between Internal & External examiners. This should include, specimens, instruments, microscopy & drugs on table no 1 & emergencies, radio-diagnostics, electrodiagnostic & Biochemical Lab. investigations on table no 2 as applicable to the course contents of final M.B.B.S. Exam.

# **PAEDIATRICS**

## **Paediatric including Neonatology**

The course includes systematic instructions in growth and development, nutritional needs of a child, immunization schedules and management of common diseases of infancy and childhood including scope for Social Paediatrics and counseling.

### **(i) GOAL :**

The broad goal of the teaching of undergraduate students in Paediatrics is to acquire adequate knowledge and appropriate skills for optimally dealing with major health problems of children to ensure their optimal growth and development.

### **(ii) OBJECTIVES :**

#### **(a) KNOWLEDGE :**

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

- (1) Describe the normal growth and development during foetal life, neonatal period, childhood and adolescence and outline deviations thereof;
- (2) Describe the common paediatric disorders and emergencies in terms of Epidemiology, aetiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
- (3) Age related requirements of calories, nutrients, fluids, drugs etc, in health and disease;
- (4) Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
- (5) Outline national Programmes relating to child health including immunization Programmes.

#### **(b) SKILLS :**

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

- (2) take a detailed paediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.
- (3) Take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, perform venesection, start an intravenous saline and provide nasogastric feeding :

- (4) Conduct diagnostic procedures such as a lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascitic tap;
- (5) Distinguish between normal newborn babies and those requiring special care and institute early care of all newborn babies including care of preterm and low birth weight babies, provide correct guidance and counseling in breast feeding ;
- (6) Provide ambulatory care to all sick children, identify indications for specialized / inpatient care and ensure timely referral of those who require hospitalization :

**(C) INTEGRATION :**

The training in paediatrics should prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of team in an integrated form with other disciplines, e.g. Anatomy, Physiology, Forensic Medicine, Community Medicine and Physical Medicine and Rehabilitation.

**LIST OF LECTURE/ SEMINARS Lectures : 3rd / 4th Semester :**

1. Introduction of Paediatrics.
2. History taking in children.
3. Examination of Children.
4. Normal Growth
5. Normal Development.
6. Introduction to newborn and normal newborn baby.
7. Temperature regulation in newborn.
8. Breast feeding and lactation management.
9. Infant and child feeding ( include complimentary feeding)
10. Normal fluid and electrolyte balance in children.
11. Immunization.

**Lecturers : 7th / 8th / 9th Semester :**

1. Birth Asphyxia
2. Low Birth Weight Babies.
3. Neonatal Respiratory Distress.
4. Jaundice in newborn.
5. Neonatal Infections.

6. Neonatal convulsions.
7. PEM and its management.
8. Vitamin and micronutrient deficiencies.
9. Nutritional anaemia in infancy and childhood.
10. Acute diarrhoea.
11. Hypothyroidism in children.
12. Congestive heart failure - diagnosis and management.
13. Congenital heart disease.
14. Rheumatic heart disease.
15. Hypertension in children.
16. Acute respiratory infections.
17. Bronchial asthma.
18. Nephrotic syndrome
19. Acute glomerulonephritis and hematuria
20. Abdominal pain in children.
21. Chronic liver disease including ICC.
22. Haemolytic anaemia including thalassemia.
23. Leukaemias.
24. Bleeding and coagulation disorders.
25. Seizure disorders.
26. Cerebral Palsy.
27. Common exanthematous illness.
28. Childhood tuberculosis

**Other Lectures to be covered :**

1. Fluid and electrolyte balance -pathophysiology and principles of Management.
2. Acid-base disturbances - pathophysiology and principles of management.
3. Adolescent growth and disorders of puberty.
4. Congenital heart disease.
5. Acute respiratory infections, Measles, Mumps, Chicken pox
6. Other childhood malignancies.
7. Coagulation disorders - Haemophilia

8. Mental retardation.
9. Approach to a handicapped child.
10. Acute flaccid paralysis.
11. Behaviour disorders.
12. Meningitis.
13. Diphtheria, Pertussis and Tetanus.
14. Childhood tuberculosis.
15. HIV infection.
16. Malaria.
17. Neurocysticercosis.
18. Enteric fever.
19. Immunization.
20. Pediatric prescribing.
21. Common childhood poisonings.

**Integrated Seminar Topics:** Convulsions

Coma PUO Jaundice

Portal hypertension Respiratory failure Shock

Rheumatic Heart Disease

Hypertension Diabetes mellitus Hypothyroidism Anemia

Bleeding Renal failure Tuberculosis Malaria

HIV infection

Neurocysticercosis

Perinatal asphyxia (with obstetrics)

Intrauterine growth retardation (with obstetrics)



## ***UNIVERSITY EXAMINATIONS SCHEME***

**PAEDIATRICS :-** (Including Neonatology)

Theory – One paper = 40 marks

Oral (Viva) = 10 marks

Clinical = 30 marks

Internal Assessment = 20 marks (Theory 10 Marks, Practical 10 Marks)

Grand Total = 100 marks

Criteria of passing in various subjects at III MBBS Examination

SN	Subject	Theory Paper ./ Oral/ Practical / Internal Assessment		Maximum Marks in each of the subject	Minimum marks required to pass in each part of any subject	Minimum marks required to pass in each subject out of
	Paediatrics	a) Theory	Paper	40	25	50/100
		b) Oral		10		
		c) Practical		30		
		d) Internal Assessment	Theory		10	10
			Practical		10	

Passing: A candidate must obtain 50% in aggregate with a minimum of 50% in Theory including oral and minimum of 50% in practicals

### NATURE OF THEORY QUESTION PAPERS:

Pattern of Theory Examination including Distribution of Marks, Questions, Time.

Nature of Question Paper

**Faculty with Year: MBBS Final Part-II**

**Subject: Paediatrics**

**Total Marks: 40      Time: 2.30 Hours**

### **Instructions:**

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.
- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3 and 4 time duration is 2 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3 and 4.

9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.

10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

Question No.	Question Description	Division of Marks	Total Marks
<b>1</b>	Total MCQs : 08	<b>8 X1/2</b>	<b>4</b>
<b>2</b>	Long answer question three a) b) c)	<b>3 X5</b>	<b>15</b>
<b>3</b>	short answer questions three a) b) c)	<b>3X3</b>	<b>9</b>
<b>4</b>	very short answer questions six a) b) c) d) e) f)	<b>6 X 2</b>	<b>12</b>

***Internal assessment in Theory -***

1 . Examinations during semesters : This will be carried out by conducting two theory examinations at the end of 6th and 8th semesters ( 50 marks each). Total of 100 marks to be converted into 5 marks.( A/5)

2 . Prelim examination : This shall be carried out during 9th semester.

One theory papers of 40 marks as per university examination. Total of 40 marks to be converted into 5 marks. ( B/5)

Total marks of Internal assessment of Theory will be addition of A and B.

**Internal assessment in Practical**

Examinations at end of Clinical postings:

1 There will be practical examination at the end of each clinical posting of Paediatrics.: 6th and 8th semester. Each examination will be of 50 marks.

Total of 2 examinations – 100 marks , will be converted to 5 marks.( C/5)

2. Prelim examination:

This will be conducted for 40 marks as per university examination pattern and marks will be converted to 5 (D/5).

Total marks of Internal assessment of Practical will be addition of C and D.

**PRACTICAL (FINAL EXAMINATION) : 30 Marks**

One Long Case 20 Marks

One Short Case 10 Marks

**ORAL (VIVA VOCE) 10 Marks**

# **SURGERY AND ALLIED SPECIALTIES**

## **(i)GOAL:**

The broad goal of the teaching of undergraduate students in Surgery is to produce graduates capable of delivering efficient first contact surgical care.

## **(ii) OBJECTIVES:**

The departmental objectives, syllabus and skills to be developed in the department of surgery during undergraduate medical education are presented herewith. These are prepared taking into consideration of various aspects and institutional goals given below:

1. A medical student after graduation may have different avenues of his/her professional career and may work either as a first contact physician in a private, semi-private or public sector or may take up further specialization in surgery or other specialties.
2. He may have to work in different settings such as rural, semi-urban or urban which may have deficient or compromised facilities.
3. These are based on the various health services research data in our community.
4. These are also based on following institutional goals in general;

At the end of the teaching/ training the undergraduate will be able to:

- Diagnose and manage common health problems of the individual and the community appropriate to his/her position as a member of the health team at primary, secondary and tertiary levels.
- Be competent to practice curative, preventive, promotive and rehabilitative medicine and understand the concepts of primary health care.
- Understand the importance and implementation of the National Health Programmes in the context of national priorities.
- Understand the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude required for professional responsibilities.
- Develop the ability for continued self-learning with a scientific attitude of mind and acquire further expertise in any chosen area of medicine.

## **A. KNOWLEDGE**

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

1. Describe aetiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children;
2. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion.
3. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics.
4. Describe common malignancies in the country and their management including prevention.
5. Enumerate different types of anaesthetic agents, their indications, mode of administration, contraindications and side effects

## **B. SKILLS**

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

1. Diagnose common surgical conditions both acute and chronic, in adult and children.
2. Plan various laboratory tests for surgical conditions and interpret the results;
3. Identify and manage patients of haemorrhagic; septicaemic and other types of shock.
4. Be able to maintain patent air-way and resuscitate:  
A A critically injured patient.  
B Patient with cardio-respiratory failure; C A drowning case.
5. Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children
6. Provide primary care for a patient of burns;
7. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
8. Treat open wounds including preventive measures against tetanus and gas gangrene.
9. Diagnose neonatal and paediatric surgical emergencies and provide sound primary care before referring the patient to secondary/territory centers;
10. Identify congenital anomalies and refer them for appropriate management.

In addition to the skills referred above in items (1) to (10), he shall have observed/assisted/performed the following:

- i. Incision and drainage of abscess;
- ii. Debridement and suturing open wound;
- iii. Venesection;
- iv. Excision of simple cyst and tumours.
- v. Biopsy and surface malignancy

- vi. Catheterisation and nasogastric intubation;
- vii. Circumcision
- viii. Meatotomy;
- ix. Vasectomy;
- x. Peritoneal and pleural aspirations;
- xi. Diagnostic proctoscopy;
- xii. Hydrocoele operation;
- xiii. Endotracheal intubation
- xiv. Tracheostomy and cricothyroidotomy;
- xv. Chest tube insertion.

### **Human values, and Ethical practice**

- . Adopt ethical principles in all aspects of his clinical practice. Professional honesty and integrity are to be fostered. Surgical care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- . Develop communication skills, in particular the skill to explain various options available in management
- . Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues and specialist in the field when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion

### **INTEGRATION**

The undergraduate teaching in surgery shall be integrated at various stages with different pre and para and other clinical departments.

### **LEARNING METHODS**

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- Lectures - 160 hours**
- Tutorials and revision - 140 hours**
- Bedside clinics - 468 hours five clinical postings totalling 26 weeks including**

### **Anaesthesiology**

- Clinical postings in General Surgery -**

3rd Semester - 6 weeks

5th Semester - 4 weeks

7th Semester - 4 weeks

8th Semester - 6 weeks

9th Semester - 6 weeks

## **GENERAL SURGERY LECTURES**

### **4TH Term**

General Surgery : Part I 16 Lectures

### **6th Term 3 modules**

Module 1 16 Lectures

Vascular Surgery :

Tropical Surgery :

Gen. Surgery Remaining

Module 2 16 Lectures

Head and Neck surgery

Endocrine surgery 16 Lectures

Module (3) 16 Lectures

Breast surgery

Plastic & Reconstructive Surgery

Neurosurgery 6

### **7th Term: 3 modules**

Module (1) 16 Lectures

Cardio Thoracic surgery

Paediatric surgery

Module (2) 16 Lectures

Liver )

Spleen )  
Pancreas )  
Biliary Tract )  
Portal Hypertension)

Module (3)

Upper Gastro intestinal Tract + Peritoneum 16 Lectures

**8th Term**

□□Module (1) 16 Lectures

Lower G.I. tract  
Abdominal wall,  
Incisional Hernia

□□Module (2) 16 Lectures

Upper GUT  
Organ transplantation

□□Module (3) 16 Lectures

Lower GUT  
Hernia, Hydrocoele

**9th Term**

Revision Lectures/ tutorials/ lecture cum demonstrations 48 Lectures

**TUTORIALS**

6TH Term Surgical pathology 32

8th Term Operative Surgery + Instruments 32

9th Term Imaging sciences-  
Interpretation of Investigations 28

Total 300

## **Course contents- General Surgery - including paediatric surgery**

### **COURSE CONTENTS**

#### **I. A. GENERAL PRINCIPLES**

1. Wound healing and management, scars: Hypertrophic scar and keloid; First aid management of severely injured.
2. Asepsis, antisepsis, sterilisation.
3. Surgical sutures, knots, drains, bandages and splints.
4. Surgical infections and rational use of antibiotics: Causes of infection, prevention of infection, common organisms causing infection.
5. Boils, cellulitis, abscess, necrotising fasciitis.
6. Tetanus and Gas gangrene: Prevention of Tetanus and Gas Gangrene.
7. Chronic specific infections: Tuberculosis, Filariasis, and Leprosy.
8. Antibiotic therapy.
9. Hospital infection.
10. AIDS and Hepatitis B; Occupational hazards and prevention.

#### **I. B . 1. Mechanism and management of missile, blast and gunshot injuries.**

2. Surgical aspects of diabetes mellitus.
3. Bites and stings.
4. Organ transplantation - Basic principles.
5. Nutritional support to surgical patients.

#### **II. RESUSCITATION.**

1. Fluid electrolyte balance.
2. Shock: Aetiology, pathophysiology and management.
3. Blood transfusion : Indication and hazards.
4. Common postoperative complications.

#### **COMMON SKIN AND SUBCUTANEOUS CONDITIONS.**

1. Sebaceous cyst, dermoid cyst, lipoma, haemangioma, neurofibroma, premalignant conditions of the skin, basal cell carcinoma, naevi and malignant melanoma.



2. Sinus and fistulae. Pressure sores; prevention and management.

#### IV. ARTERIAL DISORDERS.

1. Acute arterial obstruction : diagnosis and initial management; types of gangrene ; diagnosis of chronic arterial insufficiency with emphasis on Burger's disease, athrosclerosis and crush injuries.
2. Investigations in cases of arterial obstruction. Amputations;
3. Vascular injuries : basic principles of management.

#### V. VENOUS DISORDERS.

1. Varicose veins: diagnosis and management; deep venous thrombosis: diagnosis, prevention, principles of therapy; thrombophlebitis.

#### VI. LYMPHATICS AND LYMPH NODES.

1. Diagnosis and principles of management of lymphangitis, lymphedema, acute and chronic lymphadenitis; cold abscess, lymphomas, surgical manifestations of filariasis.

#### VII. BURNS.

1. Causes, prevention and first aid management; pathophysiology; assessment of depth and surface area, fluid resuscitation; skin cover; prevention of contractures.

#### VIII. SCALP, SKULL AND BRAIN.

1. Wounds of scalp and its management: recognition, diagnosis and monitoring of patients with head injury including unconsciousness; Glasgow coma scale recognition of acute / chronic cerebral compression.

#### IX.A. ORAL CAVITY, JAWS, SALIVARY GLANDS.

1. Oral cavity: I) Cleft lip and palate; Leukoplakia; retention cyst; ulcers of the tongue.  
II) Features, diagnosis and basic principles of management of carcinoma lip, buccal mucosa and tongue, prevention and staging of oral carcinomas.
2. Salivary glands: I) Acute sialoadenitis, neoplasm: diagnosis and principles of treatment.

IX. B. Epulis, cysts and tumours of jaw: Maxillofacial injuries; salivary fistulae

X. NECK.

1. Branchial cyst; cystic hygroma.

2. Cervical lymphadenitis: Non-specific and specific, tuberculosis of lymphnodes, secondaries of neck.

X. B. Thoracic outlet syndrome: diagnosis.

XI. THYROID GLAND

1. Thyroid: Surgical anatomy, physiology, investigations of thyroid disorders; types, clinical features, diagnosis and principles of management of goitre, thyrotoxicosis and malignancy, thyroglossal cyst and fistula.

XI. B. Thyroiditis, Hypothyroidism.

XII. PARATHYROID AND ADRENAL GLANDS.

Clinical features and diagnosis of hyperparathyroidism, adrenal hyperfunction/ hypofunction.

XIII. BREAST.

1. Surgical anatomy; nipple discharge; acute mastitis, breast abscess; mammary dysplasia; gynaecomastia; fibroadenomas.

2. Assessment and investigations of a breast lump.

3. Cancer breast : diagnosis, staging, principles of management.

XIV. THORAX.

1. Recognition and treatment of pneumothorax, haemothorax, pulmonary embolism: Prevention/ recognition and treatment, flail chest; Stove in chest ; Postoperative pulmonary complications.

XIV. B. Principles of management of pyothorax; cancer lung.

## XV. HEART AND PERICARDIUM.

1. Cardiac tamponade
2. Scope of cardiac surgery.

## XVI. OESOPHAGUS.

1. Dysphagia: Causes, investigations and principles of management.
2. Cancer oesophagus : Principles of management.

## XVII. STOMACH AND DUODENUM.

1. Anatomy; Physiology, Congenital hypertrophic pyloric stenosis; aetiopathogenesis, diagnosis and management of peptic ulcer, cancer stomach; upper gastrointestinal haemorrhage with special reference to bleeding varices and duodenal ulcer.

## XVIII. LIVER

1. Clinical features , diagnosis and principles of management of : Amoebic liver abscess, hydatid cyst and portal hypertension. Liver trauma.

XVIII. B. Surgical anatomy; primary and secondary neoplasms of liver.

## XIX. SPLEEN

Splenomegaly: causes, investigations and indications for splenectomy: splenic injury.

## XX. GALL BLADDER AND BILE DUCTS

1. Anatomy, physiology and investigations of biliary tree; clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis; obstructive jaundice.

XX. B. Carcinoma of gall bladder, choledochal cyst.

## XXI. PANCREAS.

Acute pancreatitis : Clinical features, diagnosis, complications and management.

Chronic pancreatitis, pancreatic tumours.

## XXII. PERITONEUM, OMENTUM, MESENTERY AND RETROPERITONEAL SPACE.

Peritonitis : Causes, recognition and principles of management; intraperitoneal abscess.

XXII B. Laparoscopy and laparoscopic surgery.

## XXIII. SMALL AND LARGE INTESTINES

1. Diagnosis and principles of treatment of : Intestinal amoebiasis, tuberculosis of intestine, carcinoma colon; lower gastrointestinal haemorrhage; Enteric fever, parasitic infestations.

XXIII. B. Ulcerative colitis, premalignant conditions of large bowel.

## XXIV. INTESTINAL OBSTRUCTION.

Types, aetiology, diagnosis and principles of management; paralytic ileus.

## XXV. ACUTE ABDOMEN.

Causes, approach, diagnosis and principles of management.

## XXVI. APPENDIX

1. Diagnosis and management of acute appendicitis, appendicular lump and abscess.

## XXVII. RECTUM.

1. Carcinoma rectum: diagnosis, clinical features and principles of management; indications and management of colostomy.

XXVII. B. Management of carcinoma rectum; prolapse of rectum.

## XXVIII. ANAL CANAL .

1. Surgical anatomy. Clinical features and management of: fissure, fistula in ano, perianal and ischiorectal abscess and haemorrhoids; Diagnosis and referral of anorectal anomalies.

XXVIII. B. Anal carcinoma.

XXIX. HERNIAS.

1. Clinical features, diagnosis, complications and principles of management of : Umbilical, Inguinal, epigastric and femoral hernia.

2. Omphalitis.

XXIX . B. Umbilical fistulae, Burst abdomen, ventral hernia.

XXX. GENITO- URINARY SYSTEM.

Symptoms and investigations of the urinary tract.

XXXI. KIDNEY AND URETER

1. Investigations of renal mass; diagnosis and principles of management of urolithiasis, hydronephrosis, pyonephrosis, and perinephric abscess, congenital anomalies of kidney & Ureter and renal tumours.

2. Renal tuberculosis.

XXXII. URINARY BLADDER.

1. Causes, diagnosis and principles of management of haematuria, anuria and acute retention of urine.

XXXIII. PROSTATE AND SEMINAL VESICLES.

Benign prostatic hyperplasia: diagnosis and management.

XXXIII. B. Carcinoma prostate.

XXXIV. URETHRA AND PENIS

1. Diagnosis and principles of management of Phimosis, paraphimosis and carcinoma penis.
2. Principles of management of urethral injuries.
3. Urethral strictures.

#### XXXV. TESTES AND SCROTUM

1. Diagnosis and principles of treatment of undescended testis; torsion testis; Hydrocoele, hematocele, pyocele, varicocele, epididymo-orchitis and testicular tumours.

#### XXXVI PAEDIATRIC SURGERY

1. Oesophageal atresia and Intestinal atresia
2. Anorectal malformations
3. Constipation in children: Hirschsprung's disease, Acquired megacolon,
4. Congenital diaphragmatic hernia
5. Extrophy, Epispadias complex and hypospadias
6. Spinal diastrophism and Hydrocephalus
7. Urinary tract infections in children- Vesicoureteral reflux, posterior urethral Valves, Vesico Ureteral Junction obstruction/Duplex ureter, Obstructive uropathy in Children : Hydronephrosis, Hydroureteronephrosis
8. Testicular Maldescent
9. Umbilical Hernia, Exompholos: Major/minor
10. Wilm's Tumours: Neuroblastoma, Ganglioneuromatoma, Ganglioneuroma, Endo-dermal Sinus Tumours.
11. Hamartomas in Children: Lymphangioma and Cystic hygroma, Haemangioma. Biliary Atresia and Surgical jaundice

#### RECOMMENDED BOOKS FOR GENERAL SURGERY

##### TEXT BOOKS:

1. Charles V. Mann, R.C.G. Russel, Norman S., Williams, Bailey and Love's Short Practice of Surgery, 23rd Edition, 2000 Chapman and Hall.
2. K.Das: Clinical Methods in Surgery, 8th Edition, 1968, Suhas Kumar Dhar, Calcutta.
3. JSP Lumley : Hamilton Bailey's Physical Signs 18th Edn Butterworth/Heinemann. 1997,

4. Somen Das ; A Practical Guide to Operative Surgery, 4th Edition, 1999, s. Das, Calcutta

### **REFERENCE TEXT BOOKS**

1. James Kyle : Pye's Surgical handicraft, Indian edition, k.m. Varghese Company David C.
2. Sabiston ; Text Book of surgery : The Biological basis of Modern Surgical Practice, 15th Edition, 1971, W.B. Saunders.
3. Seymour I. Schwartz, G. Tom Shines, Frank C. Spencer, Wendy Cowles Husser: Principles of Surgery, Vol. 1 & 2, 7th Edition, 1999, Mc Graw Hill
4. R.F. Rintoul : Farquharson's Text Book of Operative Surgery, 8th Edition, 1995, Churchill Livingstone.
5. Sir Charles Illingworth, Bruce m. Dick: A Text Book of Surgical Pathology, 12th Edition, 1979, Churchill Livingstone.
6. R.W.H. McMinn : Last's Anatomy: Regional and Applied; 10th Edition, 1999, Churchill Livingstone

## **ORTHOPAEDICS**

### **(A) KNOWLEDGE**

The student shall be able to:

1. Explain the principles of recognition of bone injuries and dislocation.
2. Apply suitable methods to detect and manage common infections of bones and joints.
3. Identify congenital, skeletal anomalies and their referral for appropriate correction or rehabilitation.
4. Recognize metabolic bone diseases as seen in this country:
5. Explain etiology, manifestations, and diagnosis of neoplasm affecting bones.

### **(B) SKILLS:**

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

1. Detect sprains and deliver first aid measures for common fractures and sprains and manage uncomplicated fractures of clavicle, Colles's forearm, phalanges etc.

2. Use techniques of splinting, plaster, immobilization etc.
3. Manage common bone infections, learn indications for sequestration, amputations and corrective measures for bone deformities;
4. Advise aspects of rehabilitation for Polio, Cerebral Palsy and Amputation.

### **(C) APPLICATION**

Be able to perform certain orthopaedic skills, provide sound advice of skeletal and related conditions at primary or secondary health care level.

### **(D) INTEGRATION**

#### **LEARNING METHODS**

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- Lectures - 50 hours
- Tutorials and revision - 50

#### **Clinical postings in Orthopaedics**

##### **Total clinical Posting of 10 weeks of 180 hours**

5th Semester - 4 weeks

6th Semester - 4 weeks

9th Semester - 2 weeks

#### **Course contents and suggested lecture program of Orthopaedics (Total 100 hours)**

This is suggested programme and can vary at institute

Total 100 hours of teaching has to be done in Orthopaedics including Tutorials

Details of syllabus is given separately below after distribution as per semester

- 6th Semester Lectures 1 to 16**
- 8 th Semester Lectures 1 17 to 32
- 8th Semester Lectures 2 33 to 48



*Topic : General Orthopaedics*

Lectures

1. Introduction and scope of Orthopaedics Traumatology and Orthopaedic Diseases. Idea about Scheme of Examination.
2. Definition and Classification of Fracture and Dislocation Signs, symptoms and diagnosis of sprain, contusion fracture and dislocation.
3. First aid measures in Poly-trauma patient, spinal cord Injury patients and knowledge about various splints.
4. & 5 Principles of Management of sprain, Fracture and Dislocation with emphasis on various aspects of closed reduction, immobilization including internal fixation and rehabilitation.
- 6,7,8 Complications of fracture and its management with specific reference to malunion Delayed union, Non union, Myositis Ossificans, Sudeck's dystrophy, Volkman's ischaemia, Avascular Necrosis, Fat embolism, secondary Osteoarthritis and injury to Muscles, Tendon, nerve and Blood vessels.
9. Plaster technique, plaster complications and plaster disease.
10. Fracture Healing in cortical and cancellous bones and factors affecting fracture healing.

**Topic : Orthopaedic Traumatology**

11. Fracture clavicle, scapula, neck humerus and shaft humerus.
12. Supracondylar fracture humerus with complications.
13. Fracture Forearm bones, Monteggia and Galeazzi fracture dislocations, fracture olecranon head and neck radius.
14. Fracture scaphoid, Metacarpals and phalanges.
15. Colles fracture and Complications.
16. Dislocation (Acute and Recurrent) of shoulder and elbow.
17. Fracture of Vertebrae with complications.
18. Fracture of Pelvis with complications.
19. Fracture Neck femur and trochanteric fracture.
20. Fracture shaft femur and fractures around knee.
21. Meniscus and ligaments injury at knee.
22. Fracture Tibia-fibula, fracture in tarsals, Metatarsals and phalanges.

23. Fracture dislocation around ankle,
24. Dislocation of Hip, knee, ankle, tarsals and small bones in foot.

**Topic : Orthopaedic Diseases**

- 25,26 Congenital skeletal anomalies with emphasis on congenital Talipes Equino varus (CTEV).
27. Congenital dislocation of hip (CDH), Osteogenesis Imperfecta, spina
28. Bifida and Torticollis.
29. Osteochondritis – various types. Post Polio Residual Palsy with stress on preventive and rehabilitation aspect.
30. Acute Osteomyelitis.
31. Chronic Osteomyelitis.
32. Pyogenic arthritis of Hip, knee.
- 33,& 34. Osteo-articular Tuberculosis with special reference to Tuberculosis of Hip, knee and elbow.:-
35. Tuberculosis spine and paraplegia.
36. Fungal Infections and leprosy in Orthopaedics.
37. Cerebral palsy, Diagnosis and rehabilitation.
38. Rheumatoid arthritis.
39. Degenerative arthritis.
40. Nerve injuries and principles of management.
41. Amputation and Disarticulation – Indications methods and complications.
42. Metabolic bone disease : Rickets, Osteomalacia and Osteoporosis.
- 43,& 44 Tumours of bones and its classification. Benign :- Osteochondroma, Giant cell tumour Unicameral Bone cyst, Aneurysmal cyst.
- 45,46 Malignant- Osteogenic sarcoma, Ewing's tumour, Fibrosarcoma, Chondrosarcoma, Multiple Myeloma, Secondaries from Primary Carcinoma (Metastatic tumours)
47. Back ache,
48. Frozen shoulder, Tennis Elbow, Dequervain's disease, Dupuytren's Contracture Osgood – Schlatter's disease, planter fasciitis.

## **Practical and Lecture cum Demonstration Classes, in MBBS in Orthopaedics**

Once a week class for two hours in 8th/9th semester.

Topics of Demonstrations :-

1. Plaster technique and splint applications.
2. Traction application, Orthopaedic appliances demonstration, Demonstration of Physiotherapy equipments.
3. Specimens of sequestrum and Tumours, Madura foot etc.
4. Common instruments and Implants.
- 5 to 7. Common X-rays of traumatology, bony infection, joint infection and tuberculosis, Malunited Colle's fracture, forearm or Supracondylar Humerus fracture.
- 8 to 10. Chronic osteomyelitis case, knee effusion case, Non union case, Bony tumour case.

Seminar Topics :-

1. Osteomyelitis.
2. Tuberculosis.
3. Bone tumours
4. First aid and Acute trauma Life saving (ATLS) measures. Tutorial Topics :-
5. Supracondylar fracture Humerus.
6. Colle's fracture.
7. Fracture neck femur.
8. Spine examination, Pott's spine and paraplegia
9. CTEV.
10. Shoulder, Elbow and wrist examination.
11. Hip examination.
12. Knee, ankle foot examination.
13. Nerve examination and nerve injuries.

### **Internal assessment:**

- Two Term ending examination at the end of Posting of 50 marks each

Total 100 out of 450 marks under general surgery.

## **ANAESTHESIOLOGY**

### **DEPARTMENTAL OBJECTIVES:**

At the end of the training, the students should be able to:

- Perform cardio-pulmonary resuscitation with the available resources and transfer the patients to a bigger hospital for advanced life support.
- Set up intravenous infusion.
- Clear and maintain airway in an unconscious patient.
- Administer oxygen correctly.
- Perform simple nerve block.
- Exhibit awareness of the principles of administration of general and local anaesthesia.

### **SKILLS:**

1. Start I V line and infusion in adults, children and neonates.
2. Do venous cutdown.
3. Insert, manage a CVP line.
4. Conduct CPR (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.
5. Perform nerve blocks like infiltration, digital and field blocks.
6. Do lumbar puncture.
7. Administer O<sub>2</sub> by mask, catheter, and O<sub>2</sub> tent and be able to handle O<sub>2</sub> cylinder.

### **LEARNING METHODS**

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- Lectures - 20 hours**
- Tutorials and revision -**
- Bedside clinics - 36 hours, one clinical postings**

**2 weeks in Anaesthesiology**

### **COURSE CONTENTS:**

1. Cardiopulmonary resuscitation (CPR) - basic and advanced, including use of simple ventilators.

2. Anatomy of upper airway, sites of respiratory obstruction and management of airway in an unconscious patient.
3. Various methods of oxygen therapy and its indications.
4. The pharmacology of local anaesthetics, their use and how to perform simple nerve blocks like - Infiltration anaesthesia, digital block, ankle block, pudendal and paracervical blocks.
5. Management of complications of regional anaesthesia. The principles of administration of general anaesthesia.

## **RADIOLOGY :DIAGNOSIS & IMAGING**

### **Goals :**

- Realisation of the basic need of various radio-diagnostic tools.
- Radio-diagnostic Techniques to be adopted indifferent clinical situations in diagnosis of ailments.

### **Objectives :**

#### **Knowledge: -**

The student shall be able to

1. Understand basics of X-ray / USG production, its utility and hazards
2. Appreciate and diagnose radiological changes in diseases of Chest, Abdomen, Skeletal system, Gastro-intestinal system, Genito-urinary System & CNS
3. Learn about various Imaging techniques like nuclear medicine, computerised tomography (CT), Ultrasound, magnetic resonance imaging (MRI), conventional & Digital subtraction Angiography (DSA).

#### **Skills: -**

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

1. Interpret various radiological findings and their consequences
2. Use basic protective techniques during various Imaging procedures
3. Advice appropriate Diagnostic procedures to arrive at an appropriate diagnosis.

### **LEARNING METHODS**

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- Lectures - 20 hours
  - Tutorials and revision -
  - Bedside clinics - 36 hours, one clinical postings
- 2 weeks in Radiology

### **I : BONES & JOINTS :**

Congenital dislocation of hip, congenital syphilis, Achondroplasia, Osteogenesis Imperfecta.

Infection : Osteomyelitis, Tuberculosis of Bone & Spine.

Lesions of Joints : Septic / Tuberculous Arthritis, Rheumatoid, Arthritis, Ankylosing Spondylitis, Osteo-Arthritis, Gout.

Bone Tumours: Ewing's, Osteogenic Sarcoma, Giant Cell Tumour Neurofibroma.

Lymphoreticular system & Haemopoietic Disorders : Thalassemia, Sickle Cell disease, Lymphomas, Multiple myeloma, plasmacytoma, Haemophilia.

Metabolic & Endocrine Disorders of Bone: Rickets & Osteomalacia, Scurvy, Osteoporosis, Acromegaly, and Hyperparathyroidism.

Skeletal trauma: General Principles.

### **II: Chest:**

Methods of examination, Normal X-ray Chest, Bronchopulmonary Segments. Interpretation of Abnormal Chest X-ray : Silhouette sign, Air Bronchogram,

Interstitial Shadows, Alveolar Shadows, Honeycomb Lung, Cavitations, Calcification, Hilar Shadow, Mediastinum, Pleura.

Bronchography. Bronchogenic Carcinoma.

Miliary Shadows, Pulmonary Tuberculosis, Solitary Pulmonary Nodule, Bronchiectasis, Primary complex.

### **III : CARDIO-VASCULAR SYSTEM**

Normal Heart : Methods of examination. Cardiomegaly, Pericardial Effusion.

Acquired Heart Diseases: Valvular Heart Disease, Ischaemic Heart Disease. Congenital Heart Disease.

Aortic Aneurysms, Co-arcuation of Aorta.

### **IV : GASTRO-INTESTINAL TRACT & ABDOMEN :**

Barium Examination of GI Tract. Acute Abdomen.

Oesophagus: Carcinoma, Strictures, Varices, Achalasia, and Hiatus Hernia. Stomach & Duodenum : Ulcer disease, Malignancy.

Intestine: Intestinal Obstruction, Volvulus, Ulcerative Colitis, Intussusceptions, Malignancy, Hirschsprung's Disease, Koch's Abdomen Diverticular Disease, Polyps.

#### **V : HEPATO-BILARY SYSTEM, PANCREAS :**

Liver : Abscess, Hepatoma, Cirrhosis, Portal Hypertension, and Spenoportography. Gall-Bladder : Calculus Disease, Malignancy, PTC, ERCP.

Pancreas : Pancreatitis, Malignancy.

#### **VI : URORADIOLOGY:**

Method of Examination : Intravenous Urography (IVP)

Calculus Disease, PUJ Obstruction, PU Valves, Renal Artery Stenosis, Wilm's Tumour, Renal Cell Carcinoma, GU Koch's.

#### **VII : OBSTETRICS & GYNAECOLOGY :**

Hysterosalpingography (HSG), Intra-Uterine Foetal Death, Fibroid, Ovarian Tumours, Ultrasonography & Transvaginal US.

#### **VIII: CENTRAL NERVOUS SYSTEM :** Raised Intracranial Tension, Intracranial

Calcification, Head Injury, Cerebrovascular

Accident, Ring Enhancing Lesions in Brain, Spinal Neoplasms, Myelography.

#### **IX: MISCELLANEOUS:**

Radiation Hazards, Radiation Protection. Imaging Modalities :

USG, CT, MRI : Principles, Applications, Advantages, Limitations, Developments.

Angiography : Seldinger Technique, Conventional Angiogram, DSA, Carotid, Coronary, Renal Angiograms, Aortogram.

Contrast Media : Barium Sulphate, Water Soluble & Oily Contrast. Interventional Radiology :

Developments, Angioplasty, Embolisation. Mammography: Principles & Applications.

Internal assessment:

Term ending examination at the end of Posting of 50 marks out of

Total 450 marks under general surgery.

## **DENTISTRY FOR MBBS STUDENTS UNDER SURGERY**

### **GOALS**

Comprehensive understanding of Dentistry, Orofacial structures, the Dentition, Maxillary and Mandibular jaws and the Diagnosis, Treatment, Prevention, Restoration and Rehabilitation of the common dental problems

### **OBJECTIVES**

#### **A. KNOWLEDGE**

- Various Diseases, Syndromes, Lesions, Disorders manifesting and affecting the Oral cavity, the Jaws and the TM joint.
- Effects of Dental Caries, Gingival and Periodontal diseases and Malocclusion.

#### **B. SKILLS**

- Examination of the Oral cavity and the TM Joint
- Local Anaesthesia Administration. Dental block
- Exodontia.
- Emergency management of Maxillofacial Trauma.
- Plaque control and Oral health care regimen.

### **Learning methods**

**Total teaching hours: 10**

**Theory lectures: 10** in 7th Semester

Clinical Postings; **2weeks** each in 7th semester

Internal assessment:

- Term ending examination at the end of Posting of 50 marks out of Total 450 marks under general surgery.

### **COURSE**

III MBBS, 7Th SEMESTER LECTURES: 10 Hours.

1. Scope of Dentistry -Introduction of various branches of Dentistry. Basic Understanding of Dental Epidemiology Effects of deleterious Habits on Dentition and Orofacial structures.
2. Development and Growth of Jaws & Orofacial structures. Development & Eruption of teeth, Deciduous & Permanent. Occlusion. Preventive Care in Paediatric patients.
3. Dental Caries -Gingival & Periodontal Diseases. Developmental Anomalies. Cysts & Tumours of Oral cavity. Neoplasms of Oral cavity. Oral Microbiology.



4. Orofacial Pain & its Management
  5. Maxillofacial Trauma and Management of patient.
  6. Oral Medicine Systemic diseases, the relevance of medications prescribed & their Oral Manifestations. Infections of Orofacial structures esp. periodontal diseases & their Manifestations in Systemic conditions. Relationship between Oral and systemic health. Women's Oral health care in Reproductive phase.
  7. Interdisciplinary team approach in the management of a patient in Dentistry involving Paediatrics, Plastic surgery, ENT Surgery, Neurosurgery, Ophthalmic surgery, Gen. Surgery, Medicine, Orthopaedics, Dermatology, Endocrinology and OB-GYN.
  8. Rehabilitation of lost Oral structures.  
Implantology.
  9. Dentofacial Deformities and Surgical corrections.
  10. Biomaterials used in Dentistry.  
Emerging technologies in Contemporary Dentistry. Molecular Dentistry.  
Integration with anatomy, surgery, pathology radiology and Forensic Medicine be done.
- CLINICAL POSTING in DENTISTRY - 2 WEEKS**
1. L.A. Administration, Techniques for different Blocks.
  2. Exodontia
  3. Preliminary Management of Maxillofacial Trauma
  4. Pathological conditions of Oral cavity.
  5. Oral and Maxillofacial Radiography & Imaging  
Demonstration of Clinical Procedures in Dental Clinics.
  6. Maxillo Facial Prosthodontics

## SCHEME FOR FINAL MBBS EXAMINATION IN OBSTETRICS AND GYNAECOLOGY

### University Examinations Scheme

Theory 2 papers of 60 marks each = 120 marks

**Paper I** – section A- General principles of Surgery, Oncology, head, face, neck, Breast, Endocrine Surgery,  
Section B- Trauma and Orthopedic surgery.

**Paper II** - Gastrointestinal Tract including colon rectum and anal canal, Liver, pancreas and biliary tract, Spleen. Paediatric Surgery, Urology, Cardio thoracic surgery and Plastic surgery, Dental surgery, Radiology and Radiotherapy, Anaesthesiology.

**Oral (viva)** = 20 marks

**Clinical (Bedside)** = 100 marks

**Internal Assessment** = 60 marks (Theory 30 Marks, Practical 30 Marks)

**Grand Total** = 300 marks

- These are the broad division of topics to cover the whole syllabus. There are chances of overlapping of topics in both papers, students must be prepared accordingly. No claim of overlapping questions shall be entertained by the university

#### Criteria of passing

SN	Subject	Theory Paper ./ Oral/ Practical / Internal Assessment		Maximum Marks in each of the subject	Minimum marks required to pass in each part of any subject	Minimum marks required to pass in each subject out of
	General Surgery	a) Theory	Paper I	60	70	150/300
			Paper II	60		
		b ) Oral		20		
		c) Practical		100	50	
		d) Internal Assessment	Theory	30	30	
	Practical		30			

Passing: A candidate must obtain a minimum of 50% in Theory including oral and minimum of 50% in practical's

**NATURE OF THEORY QUESTION PAPERS:**  
Pattern of Theory Examination including Distribution of Marks, Questions, Time.

**Faculty with Year: MBBS Final Part-II**

**Subject: General Surgery**

**Paper: I**

**Total Marks: 60      Time: 3 Hours**

**Instructions:**

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.
- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3,4,5,6,7 time duration is 2.30 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3,4,5,6,7.
- 9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- 10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

Question No.	Question Description	Division of Marks	Total Marks
<b>1</b>	Total MCQs : 20	<b>20 X 1/2</b>	<b>10</b>
<b>Section A</b>			
<b>2</b>	Long answer question three a) b) c)	<b>3 X 5</b>	<b>15</b>
<b>3</b>	short answer questions three a) b) c)	<b>3X3</b>	<b>9</b>
<b>4</b>	very short answer questions six a) b) c) d) e) f)	<b>6 X 1</b>	<b>6</b>
<b>Section B</b>			
<b>5</b>	Long answer question two a) b)	<b>2 X 5</b>	<b>10</b>
<b>6</b>	short answer questions two a) b)	<b>2X3</b>	<b>6</b>
<b>7</b>	very short answer questions four a) b) c) d)	<b>4 X 1</b>	<b>4</b>

**Faculty with Year: MBBS Final Part-II**

**Subject: General Surgery**

**Paper: II**

**Total Marks: 60      Time: 3 Hours**

**Instructions:**

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.

- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3 and 4 time duration is 2.30 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- 10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

Question No.	Question Description	Division of Marks	Total Marks
<b>1</b>	Total MCQs : 20	<b>20 X1/2</b>	<b>10</b>
<b>2</b>	Long answer question four a) b) c) d)	<b>4 X5</b>	<b>20</b>
<b>3</b>	short answer questions four a) b) c) d)	<b>4X3</b>	<b>12</b>
<b>4</b>	very short answer questions nine a) b) c) d) e) f) g) h)i)	<b>9 X 2</b>	<b>18</b>

## **PRACTICAL EXAMINATION - 100 marks**

### **Clinical examination**

- Clinical cases
  - o Long case I – Gen, Surgery. – 50 marks
  - o Short case I - Orthopaedics – 25 marks
  - o Short case II – Gen. Surgery -- 25 marks

### **Viva examination** - Duration and topic distribution (Total 20 marks)

- Tables – Viva will be directed towards **interpretation of investigation**  
At two tables, each for ten marks. Time- 10 minutes at each table
  - o Instruments + Operations, – 10 marks
  - o Surgical Pathology, Imaging sciences and Orthopaedics – 10 marks

### **Internal Assessment ( Formative Assessment)**

Theory – 30 Practical - 30 Total 60

### **Internal assessment in Theory -**

#### ***Examinations during semesters:***

This will be carried out by conducting two theory examinations during 6th and 8th semesters (100 marks each).

Total of 200 marks to be converted into 15 marks.( A/15)

#### ***Prelim examination :***

This shall be carried out during 9th semester. Two theory papers of 60 marks each as per university examination Pattern

Total of 120 marks to be converted into 15 marks. ( B/15)

Total marks of Internal assessment for Theory will be addition of A and B.

### **Internal assessment in Practical**

#### ***Examinations at end of Clinical postings:***

There will be practical examination at the end of each clinical posting of General Surgery. (3rd, 5th, 7th and 8th semester) Each examination will be of 50 marks. Total of 4 examinations - 200 marks.

These marks and marks from Orthopaedics 100, Radiology 50, Dentistry 50 and Casualty 50 will be added. - Total 450 marks will be converted to 15 marks.( C/15)

#### ***Prelim examination:***

This will be conducted for 120 marks as per university pattern and marks will be converted to 15 (D/15).

Total marks of Internal assessment for Practical will be addition of C and D.

### **Record BOOK**

Case record will have to be entered in a record book.

A combined record book of General surgery, Orthopaedics, Causality, Anaesthesiology, Dentistry and radiology will have to be maintained Minimum of five histories have to be recorded in each posting

The certificate of satisfactory completion of all clinical posting will be required from Head Of the department of Surgery. This will be base on multiple similar certificates from all postings in all subjects

In addition it will have details of all marks in posting ending exam on second page and calculation of internal assessment

Record book will not carry any marks but it will be prerequisite for Appearing for examination.

# **OBSTETRICS & GYNAECOLOGY**

These guidelines are based on MCI recommendations Teaching has to be done keeping in mind the goals and objectives to be achieved by medical student

## **(i) GOAL**

The broad goal of the teaching of undergraduate students in Obstetrics and Gynaecology is that he/she shall acquire understanding of anatomy, physiology and pathophysiology of the reproductive system & gain the ability to optimally manage common conditions affecting it.

## **(II) OBJECTIVES;**

### **(A) KNOWLEDGE:**

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

- Outline the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it.
- Detect normal pregnancy, labour puerperium and manage the problems he/she is likely to encounter therein,
- List the leading causes of maternal perinatal morbidity and mortality.
- Understand the principles of contraception and various techniques employed, methods of medical termination of pregnancy, sterilization and their complications.
- Identify the use, abuse and side effects of drugs in pregnancy, pre-menopausal and post-menopausal periods;
- Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
- Identify common gynaecological diseases and describe principles of their management.
- State the indications, techniques and complications of surgeries like Caesarian Section, laparotomy, abdominal and vaginal hysterectomy, Fothergill's operation and vacuum aspiration for Medical Termination of Pregnancy

(MTP)

### **(B) SKILLS**

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

- 1.Examine a pregnant woman; recognize high-risk pregnancies AND make appropriate referrals

2. conduct a normal delivery, recognize complications and provide postnatal care;
3. Resuscitate the newborn and recognize the congenital anomalies
4. advise a couple on the use of various available contraceptive devices and assist in insertion and removal of intra-uterine contraceptive devices.
5. Perform pelvic examination, diagnose and manage common gynaecological problems including early detection of genital malignancies;
6. Make a vaginal cytological smear, perform a post coital test and wet vaginal smear examination for Trichomonas vaginalis, Moniliasis and gram stain for gonorrhoea;
7. interpretation of data of investigations like biochemical, histopathological, radiological ultrasound etc.

### **(C) INTEGRATION**

The student shall be able to integrate clinical skills with other disciplines and bring about coordination of family welfare programme for the national goal of population control.

### **(D) GENERAL GUIDELINES FOR TRAINING:**

1. attendance of a maternity hospital or the maternity wards of a general hospital including
  - (i) antenatal care the management of the puerperium anda minimum period of 5 months in-patient and out-patient training including family welfare planning
2. of this period of clinical instruction, not less than one month shall be spent as a resident pupil in a maternity ward of a general hospital.
3. during this period, the student shall conduct at least 10 cases of labour under adequate supervision and assist 10 other cases.
4. a certificate showing the number of cases of labour attended by the student in the maternity hospital and/or patient homes respectively, shall be signed by a responsible medical officer on the staff of the hospital and shall state:
  - (a) that the student has been present during the course of labour and personally conducted each case, making the necessary abdominal and other examinations under the supervision of the certifying officer who shall describe his official position.
  - (b) That satisfactory written histories of the cases conducted including wherever possible antenatal and postnatal observations, were presented by the student and initialed by the supervising officer

## LEARNING METHODS

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- Lectures - 130 hours
- Tutorials and revision - 170 hours
- Bedside clinics - 468 hours

### (A) DIDACTIC LECTURES

SEMESTER	HOURS/WEEK	TOTAL
4	1 / WEEK	17
6	3 / WEEK	48
7	3 / WEEK	48
8	1 / WEEK	17
TOTAL		130

### B) CLINICAL DEMONSTRATIONS, PRACTICAL DEMONSTRATIONS, SEMINARS ETC.

SEMESTER	HOURS/WEEK	TOTAL
8	4 / WEEK	68
9	6 / WEEK	102
TOTAL		170

### Suggested lecture program

#### Distribution of syllabus in respective semesters

This is suggested programme and can vary at institute

Total 300 hours of teaching has to be done in OB GY including Tutorials

Details of syllabus is given separately below after distribution as per semester

#### 4th Semester :OBSTETRICS :

1. Applied anatomy of female genital tract.
2. Development of genital tract



3. Physiology of menstruation
  4. Puberty and menopause
  5. Physiology of ovulation / conception / implantation.
  6. Early development of human embryo.
  7. Structure, function and anomalies of placenta.
  8. Physiological changes during pregnancy / diagnosis of pregnancy.
  9. Antenatal care, nutrition in pregnancy, detection of high-risk pregnancy.
  10. Normal labour - Physiology, mechanism, clinical course and management, pain relief in labour.
  11. Normal puerperium and breast-feeding.
  12. Examination and care of newborn.
  13. Contraception - Introduction and basic principles
  14. Maternal mortality and morbidity, perinatal mortality and morbidity.
- National health Programme - safe-motherhood, reproductive and child health, social obstetrics.

## 6TH Semester: GYNAECOLOGY & FAMILY PLANNING

### **GYNAECOLOGY**

1. Development of genital tract, congenital anomalies and clinical significance, Chromosomal abnormalities and intersex.
2. Physiology of Menstruation, Menstrual abnormalities - Amenorrhoea, Dysmenorrhea, Abnormal Uterine Bleeding, DUB.
3. Puberty and its disorders, Adolescent Gynaecological problems.
4. Menopause & H R T.
5. Infections of genital tract, Leucorrhoea, Pruritus vulvae, Vaginitis, Cervicitis, PID, Genital TB, Sexually transmitted infections including HIV infection.
6. Benign & Malignant tumours of the genital tract.  
Leiomyoma, carcinoma cervix, carcinoma endometrium, chorio carcinoma, ovarian tumors. Benign & Malignant Lesions of Vulva
7. Radiotherapy & Chemotherapy in Gynaecology.
8. Other gynaecological disorders - Adenomyosis, Endometriosis
9. Genital Prolapse, Genital Tract displacement,

10. Urinary disorders in Gynaecology, Perineal tears, Genital Fistulae, RVF & VVF.

## **FAMILY PLANNING :**

- 
1. Demography and population Dynamics.
  2. Contraception - Temporary methods, Permanent methods.
    1. MTP Act and procedures of MTP in first & second trimester.
    2. Emergency contraception. :

## **7TH Semester : OBSTETRICS & NEWBORN**

1. Complications in early pregnancy.  
Hyperemesis gravidarum / abortion / ectopic pregnancy / gestational trophoblastic disease.
2. Obstetrical complications during pregnancy.  
APH - Accidental hemorrhage. Placenta praevia.
3. Poly hydramnios / oligohydramnios, multifetal pregnancy.
4. Medical disorders in pregnancy.  
Anemia, Heart disease. Hypertensive disorder, PIH and Eclampsia, Diabetes, jaundice, pulmonary disease in pregnancy.
5. Infections in pregnancy  
Urinary tract diseases, sexually transmitted infections including HIV, malaria, TORCH etc.
6. Gynaecological and surgical conditions in pregnancy.  
Fibroid with pregnancy, ovarian tumours, acute abdomen, genital prolapse.
7. High risk pregnancy, pre-term labour, post term pregnancy, IUGR, IUFD, pregnancy wastages, Rh incompatibility, post caesarean pregnancy.
8. Induction of labour.
9. Abnormal position & presentation : Occipito posterior, Breech, Transverse, Face & Brow, Compound, Cord Presentation and prolapse.
10. Abnormal labour - abnormal uterine action, CPD.  
Obstructed labour, uterine rupture.

11. Third stage complications - Retained placenta, PPH, Shock, Uterine inversion, Fluid Embolism.
12. Puerperial Sepsis and Other Complications in puerperium.
13. Evaluation of Foetal Health during pregnancy and labour.
14. Drugs used in obstetric practice.
15. Operative procedures in Obstetrics : Caesarean Section, Instrumental Vaginal Delivery. Forceps, Vacuum,
16. Maternal Mortality and morbidity, Perinatal mortality and morbidity. National program - safe motherhood, reproductive and child health , Social Obstetrics.

#### NEW BORN :

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1. Examination and care of new born & low birth weight babies.
2. Asphyxia and neonatal resuscitation.
3. Diagnosis of early neonatal problems.
4. Birth injuries, jaundice, infection.
5. Anencephaly & Hydrocephalus and other Congenital Anomalies of fetus.

#### **8TH Semester : PREVENTIVE ONCOLOGY**

1. Preventive Oncology
2. Principles of gynaecological surgical procedures
3. Pre and post operative care in Gynaecology
4. Ultrasonography and Radiology, in Gynaecology
5. Endoscopy in in Gynaecology
6. Drugs and hormones in Gynaecology
7. Surgical procedures in obstetrics
8. Maternal mortality
9. Perinatal mortality
10. Recurrent pregnancy wastages
11. High risk pregnancy
12. Rural obstetrics

13. Drugs in Pregnancy

14. Drugs in obstetric practice

In addition, integrated teaching with other departments like anatomy, physiology, biochemistry, pathology, microbiology, Forensic Medicine and Preventive and Social medicine to be organized for selected topics.

### **LIST OF TOPICS INTEGRATED TEACHING: 8TH TERM**

1. Development of genital tract - any malformations  
of genital tract and their clinical significance - Anatomy
2. Fetal physiology - fetal circulation Physiology
3. fetal malformations - genesis- Embryology
4. CIN Pathology
5. ARF Physiology Medicine
6. Coagulation failure Pathology Medicine
7. Diabetes, heart disease Medicine
8. USG Radiology
9. Infections in pregnancy Microbiology
10. Medico-legal aspects Forensic Medicine
11. Nutrition in pregnancy and lactation PSM
12. Evidence based obstetrics PSM
13. Drugs in pregnancy Pharmacology

## SCHEME FOR FINAL MBBS EXAMINATION IN OBSTETRICS AND GYNAECOLOGY

### University Examinations Scheme

Theory 2 papers of 40 marks each = 80 marks

**Paper I** - Obstetrics including social obstetrics and newborn care

**Paper II** - Gynaecology, Family Welfare and Demography

**Oral (viva)** = 20 marks

**Clinical (Bedside)** = 60 marks

**Internal Assessment** = 40 marks (Theory 20 Marks, Practical 20 Marks)

**Grand Total** = 200 marks

- These are the broad division of topics to cover the whole syllabus. There are chances of overlapping of topics in both papers, students must be prepared accordingly. No claim of overlapping questions shall be entertained by the university

#### Criteria of passing

SN	Subject	Theory Paper ./ Oral/ Practical / Internal Assessment		Maximum Marks in each of the subject	Minimum marks required to pass in each part of any subject	Minimum marks required to pass in each subject out of
	Obstetrics and Gynaecology	a) Theory	Paper I	40	50	100/200
			Paper II	40		
		b) Oral		20		
		c) Practical		60	30	
		d) Internal	Theory	20	20	
		Assessment	Practical	20		

Passing: A candidate must obtain 50% in aggregate with a minimum of 50% in Theory including oral and minimum of 50% in practical's

**NATURE OF THEORY QUESTION PAPERS:**  
Pattern of Theory Examination including Distribution of Marks, Questions, Time.

**Faculty with Year: MBBS Final Part-II**

**Subject: Obstetrics and Gynaecology**

**Paper: I**

**Total Marks: 40      Time: 2.30 Hours**

**Instructions:**

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.
- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3 and 4 time duration is 2 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- 10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

Question No.	Question Description	Division of Marks	Total Marks
<b>1</b>	Total MCQs : 08	<b>8 X 1/2</b>	<b>4</b>
<b>2</b>	Long answer question three a) b) c)	<b>3 X 5</b>	<b>15</b>
<b>3</b>	short answer questions three a) b) c)	<b>3X3</b>	<b>9</b>
<b>4</b>	very short answer questions six a) b) c) d) e) f)	<b>6 X 2</b>	<b>12</b>

**Faculty with Year: MBBS Final Part-II**

**Subject: Obstetrics and Gynaecology**

**Paper: II**

**Total Marks: 40      Time: 2.30 Hours**

**Instructions:**

- 1) All questions are compulsory
- 2) MCQ question paper should be conducted and completed in first 30 min. written question paper must be given only after taking back the MCQ answer sheet
- 3) Fill (dark) the appropriate empty circle below the question number once only.
- 4) Use blue/black ball point pen only.
- 5) Each MCQ carries half mark.
- 6) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked on MCQ.
- 7) For Question no. 2, 3 and 4 time duration is 2 hour
- 8) Draw diagrams wherever necessary for Question no. 2, 3 and 4.
- 9) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
- 10) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.

Question No.	Question Description	Division of Marks	Total Marks
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<b>3</b>	short answer questions three a) b) c)	<b>3X3</b>	<b>9</b>
<b>4</b>	very short answer questions six a) b) c) d) e) f)	<b>6 X 2</b>	<b>12</b>

□ **Internal assessment: 40 ( Theory 20 +Practical 20)**

**Internal assessment in Theory -**

**Examinations during semesters:** This will be carried out by conducting two theory examinations during 6th and 8th semesters ( 100 marks each). Total of 200 marks to be converted into 10 marks.( A/10)

**Prelim examination :** This shall be carried out during 9th semester. Two theory papers of 40 marks each as per university examination. Total of 80 marks to be converted into 10 marks. ( B/10)

Total marks of internal assessment- Theory will be addition of A and B.

**Internal assessment in Practical Examinations at end of Clinical postings:**

There will be practical examination at the end of each clinical posting of OBGY. Each examination will be of 50 marks. Total of all exams marks will be converted to 10 marks.( C/10)

**Prelim examination:**

This will be conducted for 60 marks as per university pattern and marks will be converted to 10 (D/10). Total marks of internal assessment- Practical will be addition of C and D.

**Scheme Of Practical & Oral Examination For Obstetrics & Gynaecology**

**PRACTICAL : Total – 60 Marks**

1) LONG CASE : 40 Marks

2) SHORT CASE : 10 Marks

3) FAMILY PLANNING 10 Marks

**Total : 60 Marks**

**4) ORAL / VIVA 20 Marks**

A) Obstetric Viva 10 Marks

B) Gynaecology Viva 10 Marks

**Marks of VIVA will be added to Theory marks**

**It is mandatory to obtain 50% marks in theory+viva/oral.**

## **INTERNSHIP PROGRAMME**

Internship discipline related and curriculum in family welfare shall be according to norms laid down by Medical Council of India