



सत्यमेव जयते

**JAWAHARLAL INSTITUTE OF POSTGRADUATE MEDICAL  
EDUCATION & RESEARCH**

(An Institution of National Importance under Ministry of Health &  
Family Welfare, Govt. of India)

Dhanvantri Nagar, Puducherry-605006.

**MBBS Revised Curriculum  
Phase - III**

**Final MBBS Part - II**

(Approved by 12<sup>th</sup> Standing Academic Committee, JIPMER)

**2018**



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## **ACADEMIC AFFAIRS MEMBERS**

<b>1. Director</b>	<b>Chairman</b>
<b>2. Dean (Academic)</b>	<b>Member Secretary</b>
<b>3. Faculty (Academic)</b>	<b>Member</b>
<b>4. Controller of Examinations</b>	<b>Member</b>
<b>5. Assistant Controller of Examinations</b>	<b>Member</b>
<b>6. HOD of Medical Education</b>	<b>Member</b>

## **ACKNOWLEDGEMENT**

A curriculum is considered as the “heart” of any learning institution which means that any college or university cannot exist without a curriculum. With its importance in formal education, the curriculum has become a dynamic process due to the changes that occur in our society. Curriculum reform is a challenging and difficult task. Even the effort to ascribing a single definition to curriculum is difficult. Curriculum serves as a body of knowledge to be transmitted. It is also viewed as a process, and as praxis.

I express my heartfelt gratitude to the Director, JIPMER who inspite of being extraordinarily busy in his schedule spared his valuable time for providing guidance in making reforms in this curriculum.

I take this opportunity to express my deepest gratitude to Dr. D. Kadambari, HOD of Medical Education, Dr. Debdatta Basu, Professor (Sr. Scale) of Pathology, Dr. Zayapragassarazan. Z, Additional Professor of Medical Education, Dr. Nanda Kishore Maraju, Additional Professor of Surgery, Dr. Santosh Kumar, Technical Consultant, Medical Education and Head of the Departments and faculty members of ENT, Ophthalmology, and Preventive & Social Medicine who earnestly offered their support to develop this curriculum.

I would also express my thanks to the staff members of academic section for their support in bringing out this curriculum in an effective manner.

**Dr. R.P. SWAMINATHAN**  
Dean (Academic)

## **PREAMBLE**

Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry, under Government of India since the year 1956, is one of the leading Medical Institutions of India. Spread over a sprawling 195 acre campus in an urban locale of Puducherry (formerly Pondicherry), The Institute was functioning under the administrative control of Directorate General of Health Service, Ministry of Health and Family Welfare, New Delhi On 14-7-2008 JIPMER has been declared as an “Institution of National Importance” by an Act of Parliament, JIPMER, Puducherry. A copy of the Act was Gazette notified on 14-7-2008. In order to demonstrate high standard of medical education on par with international level JIPMER is empowered to set patterns in Undergraduate and Postgraduate Medical Education in all its branches to encourage experiments in the curriculum as per the act and it is outside the jurisdiction of Medical Council of India. The Institution is now empowered to award Medical Degrees, Diplomas, etc., under the clauses 23 & 24 of the said Act. Such Degrees / Diploma, etc., shall be deemed to be included in the schedules to the respective Acts governing Medical Council of India, Indian Nursing Council and Dental Council of India, entitling the holders to the same privileges as those attached to the equivalent awards from the recognized Universities of India.

JIPMER imparts Undergraduate (UG), Postgraduate (PG) and Super Specialty Medical Training through a working hospital (JIPMER Hospital) with bed strength of 2134. Undergraduate degrees M.B.B.S., B.Sc. Nursing, B.Sc. Allied Medical Sciences and post graduate degrees M.Sc., M.D., M.S are offered in 43 disciplines. Super specialty courses (D.M./ M.Ch.) are offered in the following disciplines (Cardiology, Neurology, Cardiothoracic Surgery, Neurosurgery, Urology, Plastic Surgery, Pediatric Surgery, Pediatric Critical care, Neonatology, Clinical Immunology, Clinical Pharmacology, Nephrology, Medical Oncology, Endocrinology, Surgical Oncology, Cardiac Anaesthesia, Medical Gastroenterology and Surgical Gastroenterology). In addition to this Post-Doctoral Fellowship courses are also offered in 12 disciplines. Full-time Ph.D. Programs are also available in eleven disciplines as on date. Master of Public Health and Post Basic Diploma Courses in Nursing were started in January 2014. JIPMER also has started its outreach campus at Karaikal with an intake of 50 students for MBBS course, from the academic session 2016-17.

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# **1. OUTCOMES OF MBBS COURSE**

## **A. GOAL**

Developing graduates, who are capable of independently rendering comprehensive primary healthcare and well versed with fundamentals of course disciplines.

For rendering comprehensive primary healthcare independently, Entrustable Professional Activities (EPAs) need to be performed using necessary Competencies such as CanMEDS (Canadian Medical Education Directions for Specialists). One of the important EPAs is diagnosing and managing Clinical Presentations. Skills include laboratory and clinical procedural skills.

## **B. ENTRUSTABLE PROFESSIONAL ACTIVITIES (EPAs)**

1. Diagnosing and managing common Clinical Presentations
2. Diagnosing and providing first-line care for medical and surgical emergencies
3. Performing general medical procedures
4. Defining and managing common health problems of the community
5. Implementing National Health Programmes
6. Participating in health quality improvement initiatives

## **C. COMPETENCIES TO BE ACHIEVED**

1. Medical expertise
2. Communication
3. Collaboration
4. Professionalism
5. Health advocacy
6. Leadership

## **D. ESSENTIAL SKILLS LIST FOR MBBS**

A comprehensive list of skills recommended as desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) Graduate

### **1. Clinical evaluation**

- a. To be able to take a proper and detailed history.
- b. To perform a complete and thorough physical examination and elicit clinical signs.
- c. To be able to properly use the Stethoscope, Blood pressure apparatus, Otoscope, Thermometer, Nasal speculum etc;
- d. To be able to perform internal examination – per rectum (PR), per vaginum (PV) etc;
- e. To arrive at a proper provisional clinical diagnosis.

### **2. Bed side diagnostic tests**

- a. To do and interpret haemoglobin (Hb), total count (TC), erythrocyte sedimentation rate (ESR), blood smear for parasites, urine examination / albumin / sugar / ketones / microscopy;
- b. Stool exam for ova and cysts;
- c. To do Gram's stain and Ziehl-Neelsen stain for AFB;
- d. To do skin smear for lepra bacilli;
- e. To do and examine a wet film vaginal smear for Trichomonas;
- f. To do a skin scraping and Potassium hydroxide (KOH) stain for fungal infections;
- g. To perform and read Mantoux test.

### **3. Ability to carry out procedures**

- a. To conduct CPR (Cardiopulmonary resuscitation) and First aid in newborns, children and adults.
- b. To give subcutaneous (SC) / Intramuscular (IM) / Intravenous (IV) injections and start Intravenous (IV) infusions.
- c. To pass a nasogastric tube and give gastric lavage.
- d. To administer oxygen – by mask / catheter.
- e. To administer enema.
- f. To pass a urinary catheter – male and female



- g. To insert flatus tube.
- h. To do pleural tap, ascitic tap and lumbar puncture.
- i. Insert intercostal tube to relieve tension pneumothorax.
- j. To relieve cardiac tamponade.
- k. To control external haemorrhage.

#### **4. Anaesthetic Procedures**

- a. Administer local anesthesia and nerve block
- b. Be able to secure airway patency, administer oxygen by Ambu bag.

#### **5. Surgical Procedure**

- a. To apply splints, bandages and plaster of Paris (POP) slabs;
- b. To do incision and drainage of abscesses;
- c. To perform the management and suturing of superficial wounds;
- d. To carry out minor surgical procedures, e.g. excision of small cysts and nodules, circumcision, reduction of paraphimosis, debridement of wounds etc.,
- e. To perform vasectomy,
- f. To manage anal fissures and give injection for piles.

#### **6. Obstetric Procedures**

- a. To perform thorough antenatal examination and identify high risk pregnancies.
- b. To conduct normal delivery;
- c. To apply low forceps and perform and suture episiotomies;
- d. To insert and remove IUD's and to perform tubectomy.

#### **7. Paediatrics**

- a. To assess new born and recognize abnormalities and I.U. retardation;
- b. To perform immunization;
- c. To teach infant feeding to mothers;
- d. To monitor growth by the use of 'road to health chart' and to recognize development retardation;
- e. To assess dehydration and prepare and administer Oral Rehydration Therapy (ORT);
- f. To recognize ARI clinically;

## **8. ENT Procedures**

- a. To be able to remove foreign bodies;
- b. To perform nasal packing for epistaxis;
- c. To perform tracheostomy;

## **9. Ophthalmic Procedures**

- a. To invert eyelids;
- b. To give subconjunctival injection;
- c. To perform epilation of eye-lashes;
- d. To measure the refractive error and advise correctional glasses;
- e. To perform nasolacrimal duct syringing for patency.

## **10. Dental Procedures**

- a. To perform dental extraction

## **11. Community Health**

- a. To be able to supervise and motivate, community and para-professionals for corporate efforts for the health care;
- b. To be able to carry on managerial responsibilities, e.g. Management of stores, indenting, stock keeping and accounting;
- c. Planning and management of health camps;
- d. Implementation of national health programmes;
- e. To effect proper sanitation measures in the community, e.g. disposal of infected garbage, chlorination of drinking water;
- f. To identify and institute control measures for epidemics including its proper data collecting and reporting;

## **12. Forensic medicine including toxicology**

- a. To be able to carry on proper medico legal examination and documentation of injury and age reports.
- b. To be able to conduct examination for sexual offences and intoxication;
- c. To be able to preserve relevant ancillary materials for medico legal examination;
- d. To be able identify important post-mortem finding in common un-natural deaths.

### **13. Management of emergencies**

- a. To manage acute anaphylactic shock;
- b. To manage peripheral vascular failure and shock;
- c. To manage acute pulmonary oedema and LVF;
- d. Emergency management of drowning, poisoning and seizures;
- e. Emergency management of bronchial asthma and status asthmaticus;
- f. Emergency management of hyperpyrexia;
- g. Emergency management of comatose patients regarding airways, positioning prevention of aspiration and injuries;
- h. Assess and administer emergency management of burns.

### **E. OBJECTIVES FOR EACH DEPARTMENT**

1. To learn fundamentals of the discipline
2. To enable achievement of JIPMER MBBS Curricular Goal

## **2. GUIDELINES FOR IMPLEMENTATION OF MBBS PROGRAMME**

### **A. OVERALL GUIDELINES**

1. Entrustable Professional Activities (EPAs), CanMEDS Competencies and skills to be facilitated and assessed formatively and summatively throughout the course to enable achievement of capability to render comprehensive primary healthcare.
2. Fundamentals of course disciplines to be facilitated and assessed formatively and summatively throughout the course to enable further studies in various disciplines.
3. Integrated Learning to be facilitated by systems-based temporally synchronized teaching- learning and intra-departmental horizontal and vertical correlations of content.
4. Adult learning principles to be followed in teaching-learning and student centered learning strategy to be used.
5. A minimum of 10% of simple theory content in a module to be assigned for self-directed learning. Peer-assisted learning to be used.
6. Early clinical exposure to be used in Phase I. Teaching-learning of Basic Sciences to be included in Phase III.
7. Electives to be included in Phase III.
8. Student doctor method of clinical teaching to be incorporated.
9. Skills to be acquired and certified in skills lab, diagnostic lab and clinical areas.
10. E-learning methods to be used.
11. A Foundation Course to be conducted before MBBS Phase I.
12. Existing time-frame and teaching hours to be maintained.
13. Departmental identities to be maintained in teaching-learning program, examinations and mark sheets.

## **B. GUIDELINES FOR TEACHING-LEARNING**

1. Lectures to include active learning strategies.
2. Practicals to emphasize individual learning of skills.
3. Clinical teaching to emphasize individual learning of skills.
4. Skills lab to be used for skills learning.
5. Self-learning to be promoted by use of e-learning. Peer assisted learning to be promoted through discussions.
6. Spiral curriculum model to be used in clinical teaching-learning which has first cycle in Phase I, second cycle in Phase II and third cycle in Phase III.
7. Student doctor method to be used in clinical teaching using Reporter-Interpreter- Manager- Educator (RIME)strategy

## **C. GUIDELINES FOR ASSESSMENT**

1. Entrustable Professional Activities (EPAs) and CanMEDS Competencies to be assessed in formative and summative assessments.
2. Skills to be assessed and certified in skills lab and in practical and clinical sessions using performance criteria.
3. Assessment methods to include assignments, projects, portfolios, MCQs, OSPE and OSCE.

## **D. GUIDELINES FOR PROGRAMME EVALUATION**

Programme evaluation to be done throughout the course.

## **E. GUIDELINES FOR STUDENT SUPPORT**

Student support to be provided throughout the course.

## **F. GUIDELINES FOR FACILITATION OF IMPLEMENTATION**

Central facilitation to be provided throughout the course.

### 3. DEPARTMENTWISE CONTENT

<b>MEDICINE</b>	
<b>III SEM. FUNDAMENTALS</b>	Introduction on Practice of Medicine (Art of Medicine, Doctor-Patient relationship, Responsibilities of a doctor and Evidence Based Medicine)
	Negligence, Patient autonomy, conflict of interest, Confidentiality, Informed consent, Euthanasia
	Alterations in Temperature, Fever patterns
	Pain - Pathophysiology, Clinical types, Assessment, Management
	Weight Loss and Weight Gain
	Alteration in Pulse and Blood Pressure
	Dyspnea, Chest Pain, Palpitation
	Cough, Haemoptysis, Cyanosis, Clubbing
	Anorexia, Nausea, Vomiting, Abdominal Pain, dysphagia
	Diarrhoea, Constipation, G.I. Bleeding
	Jaundice, Hepatomegaly
	Ascites, Edema, Anasarca
	Pallor, Bleeding, Thrombosis, Splenomegaly, Lymphadenopathy
	Urinary tract symptoms (Oliguria, anuria, dysuria, pyuria, hematuria, polyuria, nocturia, chyluria and enuresis)
Headache (migraine), vertigo and dizziness	
<b>IV SEM. FUNDAMENTALS</b>	Alterations in Temperature, Fever patterns
	Dyspnea, Chest Pain, Palpitation
	Seizures, Syncope
	Motor and sensory disturbances
	Disturbances of consciousness
	Basic Genetics - modes of inheritance, pedigree, clinical application and counselling
	Nutritional assessment and requirements

<b>IV SEM INFECTIOUS DISEASES AND ENVIRONMENTAL CONDITIONS</b>	Approach to infectious diseases - diagnostic and therapeutic principles; Immune defence mechanisms
	Acute infectious diarrhoeal diseases - overview; Food poisoning and toxin mediated diarrhoea (Cholera); Traveller's diarrhoea
	Shigellosis; EIEC; Amoebiasis; Giardiasis
	Enteric fever and Salmonella infections
	Malaria
	Haemorrhagic fevers (Dengue); Leptospirosis; Rickettsial infection
	Bacteremia, sepsis, SIRS, MODS, Septic shock
	Brucellosis, Plague, Anthrax
	Clostridial infections - Tetanus, gas gangrene, botulinum, CDAD
	Nosocomial infections
	Rabies and other encephalitides (JE, HSV)
	Chikungunya; Influenza
	Herpes zoster, EBV, CMV, HHV-8
	HIV - Definitions, transmission, epidemiology, clinical manifestations, diagnosis
	HIV and opportunistic infections
	Management of HIV/ AIDS
	Common fungal infections (Candida, Aspergillus, Mucor, Cryptococcus)
	Filariasis; Leishmaniasis
	Hydatid disease; Toxoplasmosis
	Worm infestations (Hookworm, roundworm, tapeworm, pinworm, Strongyloidiasis)
Stings and bites (Snake bite, scorpion sting and others)	
<b>V SEM INFECTIOUS DISEASES AND ENVIRONMENTAL CONDITIONS</b>	Poisoning - general principles; OP poisoning, Carbamate poisoning, Organochlorine poisoning
	Plant poisons (Yellow oleander, abrus, cleistanthus collinus and datura)
	Yellow phosphorus, Paraquat, Corrosives, Prescription drug poisoning
	Drowning and electrical injuries
	Heat related disorders; Radiation related disorders

<b>V SEM NEPHROLOGY</b>	Introduction; Presenting problems in renal diseases (Edema, hypertension, renal failure, hematuria, proteinuria)
	Urinary tract infections - etio-pathogenesis, types, clinical features, diagnosis and treatment
	Glomerular disorders – overview; Nephritic syndrome – etiology, types, pathology, clinical features, diagnosis, treatment and complications.
	Nephrotic syndrome – causes, clinical features, diagnosis, complications and treatment.
	Tubular disorders, Ischemic Kidney Disease, Drugs and Toxin induced nephropathy.
	Glomerular disorders – overview; Nephritic syndrome – etiology, types, pathology, clinical features, diagnosis, treatment and complications.
	Nephrotic syndrome – causes, clinical features, diagnosis, complications and treatment.
	Tubular disorders, Ischemic Kidney Disease, Drugs and Toxin induced nephropathy.
<b>VI SEM NEPHROLOGY &amp; GASTRO ENTEROLOGY</b>	Renal failure overview; Acute Renal Failure – etio-pathogenesis, clinical features, treatment.
	Chronic Renal Failure – etio-pathogenesis, clinical features, complications.
	Management of chronic renal failure and of its complications.
	Approach to chronic diarrhoea; irritable bowel syndrome
	Malabsorption - overview, tropical sprue, celiac sprue, chronic pancreatitis
	Inflammatory bowel disorders
	Abdominal tuberculosis (Peritoneal, nodal, gastrointestinal); Hepatic; splenic
	Acute hepatitis (Viral, Alcoholic)
	Wilson’s disease, toxic and drug induced hepatitis
	Chronic hepatitis (Viral, NASH, Autoimmune)
	Cirrhosis - aetiology, pathology, clinical features, diagnosis, treatment
	Portal hypertension - causes, classification, complications and management
	Esophageal diseases - overview, GERD
Parenteral and enteral nutrition	



<b>VII SEM HAEMATOLOGY</b>	Acute leukemia
	Lymphomas
	Lymphomas continued (including CLL), Multiple myeloma
	Myeloproliferative disorders overview; Polycythemia vera
	Chronic myeloid leukemia
	Approach to anemia; Nutritional anemia (Iron deficiency anemia, Megaloblastic anemia)
	Aplastic anemia, Myelodysplastic syndrome
	Stem cell transplantation
	Hemolytic anemia
	Approach to bleeding disorders; Platelet disorders
	Clotting factor abnormalities (Including DIC)
	Thrombotic disorders and vessel wall abnormalities
	Blood component therapy and its hazards
<b>VIII SEM IMMUNOLOGY, GENETICS, GERIATRICS, ENDOCRINOLOGY</b>	Overview of immune system, primary immune deficiency disorders
	MHC complex and diseases association
	Hypersensitivity reactions
	Rheumatoid arthritis - manifestations, pathogenesis, diagnosis, management
	Spondyloarthropathies
	Crystal arthritides, Osteoarthritis
	SLE, Sjogren's syndrome
	PSS, Inflammatory myopathies, MCTD
	Sarcoidosis; Amyloidosis
	Vasculitis
	Biology of ageing, Age-related changes, Comprehensive geriatric assessment, Common geriatric problems.
	Gene mutations, Chromosomal disorders, Diagnosis of genetic disorders and therapy
HPA axis, Hypopituitarism, Short stature	

	Acromegaly, Diabetes insipidus, SIADH
	Thyroid hormone synthesis, action; Hypothyroidism: causes, clinical features, diagnosis and treatment
	Hyperthyroidism - causes, clinical features, diagnosis and management
	Hypo & Hyperparathyroidism
	Diabetes mellitus- etiopathogenesis, classification, clinical features, diagnosis, complications
	Diabetes Mellitus - Management
	Cushing's syndrome, Addisons disease
	Pheochromocytoma, Conn's syndrome
	Metabolic Bone Disease (Osteomalacia, Osteoporosis)
	Dyslipidemia
<b>VIII &amp; IX SEM NEUROLOGY</b>	Cerebrovascular Disease
	Seizure disorders.
	Motor neurone disease
	Dementia – Overview, Alzheimer's, HIV, alcoholic dementia
	Extrapyramidal system disorders – Parkinson's disease. Movement disorders.
	Ataxic disorders
	Bell's palsy, Trigeminal neuralgia, other Cranial neuropathies
	Acute bacterial meningitis, Viral/aseptic meningitis, Cerebral abscess
	Chronic Meningitis – Overview, TB Meningitis Cryptococcal Meningitis.
	Coma – approach, intracranial pressure, HIE, metabolic encephalopathy, wernicke's encephalopathy.
	Demyelinating disorders – Multiple sclerosis, ADEM.
	Primary & Metastatic tumors of the nervous system, Pseudotumour cerebri
	Diseases of spinal cord –compressive and non-compressive myelopathy, HIV myelopathy., transverse myelitis, SCD.
	Peripheral neuropathy – overview,classification and approach.
	GBS, CIDP, HIV, Diabetic neuropathy, Alcoholic, nutritional neuropathy,others.
Myasthenia gravis; Muscle disorders	

<b>IX SEM CARDIOLOGY</b>	Congenital heart disease - ASD, VSD, PDA, TOF, COA
	Rheumatic fever - etio-pathogenesis, clinical features, diagnosis and treatment
	Valvular diseases of the heart (MS, MR, AS, AR) - clinical detection and management (including complications)
	Infective endocarditis - etio-pathogenesis, clinical features, diagnosis and treatment
	Clinical detection, investigations and treatment, Coronary artery disease - Risk factors, angina pectoris (types, diagnosis and treatment)
	Coronary artery disease - ACS/ Myocardial infarction
	Myocardial diseases, myocarditis and cardiomyopathy
	Arrhythmias - Supraventricular tachycardias, Ventricular tachycardia and fibrillation, conduction defects
	Heart failure - etio-pathogenesis, types, clinical features, criteria for diagnosis, investigations and treatment
	Pericardial diseases - acute pericarditis, constrictive pericarditis, pericardial effusion
	Systemic hypertension - Classification, Essential hypertension, Clinical presentations, JNC classification, Investigations, complications and treatment
	Systemic hypertension - secondary causes, diagnosis, investigations and treatment
	Vascular diseases - Aortoarteritis, Aortic aneurysm, Aortic dissection
	Primary pulmonary hypertension - etio-pathogenesis, clinical features, diagnosis and treatment; Cor pulmonale
<b>VIII &amp; IX SEM SYMPOSIUM</b>	Common infections (fever with rash, respiratory tract, GI, urinary tract)
	Pyrexia of Unknown Origin
	Ascites, portal hypertension
	Hepatosplenomegaly, lymphadenopathy
	Bleeding diathesis
	Hypertensive emergencies, CPR
	Heart Failure, Acute Pulmonary edema
	Respiratory emergencies (status asthmaticus, Tension pneumothorax, pulmonary embolism, ARDS, Respiratory failure)

	Coma (including meningitis encephalitis status epileptics)
	Jaundice ( FHF, HE)
	Acute renal failure
	Diabetes and other Endocrine emergencies
	Acid. Base & Electrolytes
	Common poisoning - management
	Physiology of the critically ill patient and general principles of critical care management
	Nutritional assessment and requirement, Diet in diseases
	ECG basics
	Imaging (CXR, CT head, others)

## **SURGERY**

<b>III, IV &amp; V SEM GENERAL SURGERY</b>	Orientation to Didactics in General Surgery, History of Surgery,
	Wound healing
	Surgical infections – I (Physiology, Common localised infections)
	Surgical Infections – II (Surgical site infections, microbiology, antibiotic prophylaxis)
	Surgical infections – III (specific infections : tetanus, gas gangrene)
	Surgical infections – IV SIRS, MODS, Universal Precautions
	Surgical Infection –V,SIRS MODS, Universal Precautions
	Shock – Definition, types, pathophysiology, monitoring, management
	Fluid & Electrolyte Balance
	Blood Transfusion – I Products, Precautions , Indications and Complications
	Surgical Nutrition
	Metabolic response to trauma & surgery
Principles of pre-operative care	

	Principles of post-operative care
	Benign soft tissue swelling
	Lymphadenopathy - approach, TB lymphadenitis, Lymphoma
	Peripheral Vascular Diseases – Pathophysiology, hemodynamics, , Vascular lab
	Acute Limb ischemia – presentation, management
	Chronic Limb Ischemia – presentation, management
	Lower Limb Amputations
	Chronic Venous Insufficiency
	DVT & Pulmonary Thromboembolism
	Thermal burns
	Non Thermal Burns
	Hand Infections
	Foot Infections & Mycetoma
	Neoplasms of the skin
	Oral Malignancies
	Salivary Gland Tumors
	Congenital lesions of the neck
<b>VI &amp; VII SEM CARDIO- THORACIC SURGERY</b>	History and evolution of Cardiothoracic surgery
	Chest Trauma
	Vascular emergencies and Grafts
	Open Heart surgery
	Thoracic surgical conditions
<b>VI &amp; VII SEM NEUROSURGERY</b>	Congenital Anomalies
	Head Trauma
	CNS Tumours

<b>VI &amp; VII SEM UROLOGY</b>	Oliguria, Anuria and retention of Urine
	Hematuria
	Renal Tumour
	Bladder tumour
	Prostate cancer
	Cancer of Penis
	Testicular Tumour
	Hydronephrosis
	Benign prostatic hyperplasia
	GUTB GenitoUrinary Tuberculosis
	UTI Urinary Tract Infection
	Genitourinary trauma
	Urolithiasis
<b>VI &amp; VII SEM PAEDIATRIC SURGERY</b>	Introduction
	Surgical Causes of respiratory distress – Paediatrics
	Surface anomalies including umbilicus
	Neonatal Gastro-intestinal Obstruction
	Approach to a vomiting Child
	Surgical Jaundice in Childhood
	Undescended testes and Scrotal abnormalities
	Lower GI obstruction in childhood
	Abnormal masses in childhood
	Genital abnormalities including paediatric gynaecology
	Paediatric Hydronephrosis
Paediatric Trauma	

<b>VI &amp; VII SEM ANAESTHESIA</b>	Introduction to Anaesthesia and Critical Care
	Anaesthesia workstation & breathing system in Anaesthesiology
	Monitoring in anaesthesia
	Intravenous and inhalation agents
	Neuromuscular physiology and muscle relaxants
	Airway management in anaesthesia
	Regional anaesthesia techniques
	Perioperative fluid management
	Principles of cardiopulmonary resuscitation
	Preparation of patients for anaesthesia
<b>VIII &amp; IX SEM GENERAL SURGERY</b>	Embryology, anatomy and physiology of thyroid gland; physiological basis of thyroid function tests
	Neoplasms of thyroid
	Solitary thyroid nodule & Multinodular goiter :Approach
	Thyroiditis ; thyroglossal cyst and fistula principles of thyroid surgery
	Thyrotoxicosis
	Disorders of adrenal gland
	Disorders of parathyroid
	Multiple Endocrine neoplasia
	Mass Casualties
	Malignant diseases of the Breast
	Benign breast disease
	Abdominal Trauma
	Organ Transplantation
	Abdominal Tuberculosis
Peritonitis – Etiology, Diagnosis, Management	
Intra-abdominal abscesses	
Liver Abscesses – Pyogenic & Amebic	

Hydatid cyst liver
Liver Tumors
Portal Hypertension
Imaging of the Biliary tree
Bile duct : tumors,
Choledochal cysts
Gallstones
Splenectomy : Indications, preparation and complications
Acute Intestinal Obstruction – Etiology & management
Esophagus – Benign diseases
Esophagus – Malignant Diseases
Gastric Function tests
Peptic ulcer disease
Gastric Malignancy
Small Bowel Tumors – Etiology, Presentation, Management
Mesenteric Ischemia – Etiology, Presentation, Management
Acute Pancreatitis
Chronic Pancreatitis
Neoplasms of Pancreas
Endocrine tumours of Pancreas
Ambiasis & other infections of Colon
Benign & Malignant Neoplasm of colon & rectum.Principles of management of colostomy
Inflammatory bowel diseases, diverticular diseases
Anal canal – Benign lesions
Anal canal – malignancy
Soft tissue sarcomas including retroperitoneal sarcoma
Hernias



## **OBSTETRICS & GYNAECOLOGY**

<b>IV &amp; V SEM</b>	Introduction - Definition of Obstetrics, Epidemiology of Obstetrics, Birth Rate, Perinatal and Maternal Morbidity and Mortality
	Fertilization, implantation, embryogenesis
	Factors influencing normal development
	Endocrinology of pregnancy
	Physiological and Emotional changes during pregnancy
	Diagnosis of pregnancy (including laboratory & Ultrasound diagnosis) Symptoms Presumptive of pregnancy; Signs of pregnancy
	Antenatal Care – Routine
	Antenatal Care – High Risk
	Nutrition in pregnancy
	Anatomy and Physiology of normal labour (Introduce Partogram)
	Normal Puerperium
	Family Welfare Programme – Fertility control
	Leucorrhoea
	Normal Menstruation
Intersex	
<b>V I&amp; VII SEM</b>	Medical Termination of pregnancy act
	Ectopic pregnancy
	Hydatidiform mole
	PNDT Act
	Normal labour
	Labour analgesia
	Abnormal labour
	Post Partum Haemorrhage & Third stage complications
	Malposition, Malpresentations
	Contracted pelvis, CPD

	Obstructed labour
	Operative obstetrics
	Induction of labour
	Antepartum and intrapartum fetal surveillance (Ultrasound including doppler and Electronic fetal monitoring)
	Abnormal puerperium
	Post caesarean pregnancy
	Rupture uterus
	Multiple pregnancy, Hydramnios
	Ante-partum haemorrhage
	Intrauterine growth restriction
	Preterm labour, Prolonged pregnancy
	Premature rupture of membranes, intrauterine death of fetus
	Anaemia in pregnancy
	Hypertensive disorders in pregnancy
	Eclampsia
	Diabetes in pregnancy
	Rh. Incompatibility
	Heart Disease in pregnancy
	Infections during pregnancy
	Gynaecological disorders in pregnancy
	Development of genital tract; developmental anomalies
<b>VIII &amp; IX SEM</b>	Development of Genital tract and Mullerian anomalies
	Puberty disorders, amenorrhea, Inter sex
	Leucorrhoea
	Genital prolapse
	Injuries of genital tract-RVF, CPT
	Vesico-vaginal fistulae including ureteric injuries

	Pelvic inflammatory disease including TB
	Diseases of vulva
	Contraception
	Infertility - Hormonal Tubectomy
	Endoscopy in Gynaecology (Laparoscopy & hysteroscopy – Basics)
	Normal menstruation, menstrual abnormalities & A.U.B
	Fibroid uterus
	Endometriosis
	Pre-malignant lesion of endometrium and cervix
	Cancer cervix
	Carcinoma body
	Screening for genital tract malignancies (clinical and laboratory methods)
	Ovarian tumours
	Gestational Trophoblastic Diseases
<b>PAEDIATRICS</b>	
<b>IV &amp; V SEM INTRODUCTION TO PEDIATRICS</b>	Introduction
	Symptom based approach to Paediatrics
	Cardinal signs and Vital signs in children
	Recognizing a sick child
<b>IV &amp; V SEM INTRODUCTION TO NEONATOLOGY</b>	Introduction to neonatology
	Temperature regulation and feeding of newborns
	Preterm and term neonates
	Normal findings in a newborn
<b>IV &amp; V SEM FLUID AND ELECTROLYTE HOMEOSTASIS</b>	Principles of fluid therapy and acid/base balance
	Common electrolyte abnormalities- hyponatremia, hypernatremia
	Common electrolyte abnormalities- hypokalemia, hyperkalemia
	Common electrolyte abnormalities- hypocalcemia, hypercalcemia

<b>IV &amp; V SEM GROWTH AND DEVELOPMENT</b>	Principles of Growth and Development
	Key developmental milestones and their assessment
	Assessment of growth, disorders of growth
	Adolescent growth and development
<b>IV &amp; V SEM NUTRITION &amp; MISCELLANEOUS</b>	Breast feeding: introduction, principles, advantages of breast feeding.
	Breast feeding: impediments to breast feeding and management.
	Complementary feeding
	Basics of nutrition & nutritional requirements in children.
	Fat soluble vitamins- source deficiency features, toxicity, management.
	Water soluble vitamins- source deficiency features, management.
	Minerals and trace element-source, deficiency states and management.
	Protein energy malnutrition- Definition, classification & clinical features.
	Protein energy malnutrition- Management and prevention.
	Congenital Hypothyroidism.
Down Syndrome.	
<b>IV &amp; V SEM SYMPOSIUM</b>	Rashtriya Bal Swasthya Karyakram (RBSK)
	Student symposium on common childhood poisoning
	Student symposium on Growth Chart and its utilities
	Student symposium on age independent anthropometric measures
	Student symposium on National Programs concerning nutrition
	Student symposium on ARI control program
	Student symposium on National Immunization Schedule and optional vaccines
	Student symposium on IMNCI

<b>VIII &amp; IX SEM NEONATOLOGY</b>	Low birth weight baby – IUGR
	Low birth weight baby - Prematurity
	Birth asphyxia & birth injuries
	Resiratory distress syndrome
	Meconium aspiration syndrome
	Neonatal jaundice – unconjugated hyperbilirubinemia
	Neonatal jaundice – conjugated hyperbilirubinemia
	Bleeding neonate
	Neonatal infections – Early onset Sepsis
	Neonatal infections – Late onset Sepsis
	Metabolic neonatal problems
	Neonatal anaemia
	Necrotizing enterocolitis
	Apnea of Prematurity
	Chronic Lung Disease
	Neonatal convulsions
	Tracheo-esophageal fistula
	Congenital Diaphragmatic Hernia
Idiopathic hypertrophic pyloric stenosis	
Hirschprung`s disease	
<b>VIII &amp; IX SEM INFECTIOUS DISEASES</b>	Acute diarrhoea
	Chronic diarrhoea
	Acute Respiratory Infections
	Sepsis & septic Shock
	Meningitis
	Encephalitis & other intracranial infections
	Urinary tract infections and VUR
	Typhoid fever

	Malaria
	Tuberculosis - clinical types
	Tuberculosis - tuberculous meningitis
	Tuberculosis - investigations & treatment
	Diphtheria, pertussis, Tetanus
	Poliomyelitis & AFP Surveillance Programme
	Leptospirosis
	Dengue fever
	Hepatitis viruses
	Rabies
	Measles, Mumps, Rubella
	Pediatric AIDS
	Zica virus and varicella
	Miscellaneous - worm infestations
	Immunisation- principles, schedule, cold chain
<b>VIII &amp; IX SEM RS AND CVS</b>	Bronchiolitis
	Bronchial asthma including acute severe asthma
	Empyema & pleural effusion
	Pneumonia
	Approach to stridor and airway foreign body
	Pneumothorax
	Bronchiectasis
	Cardiac failure & shock
	Acute rheumatic fever
	Rheumatic heart disease -
	Congenital acyanotic heart disease- ASD, VSD
	Congenital acyanotic heart disease – PDA, CoA
Congenital cyanotic heart disease – (TOF)	

	Congenital cyanotic heart disease- TGA and TAPVC
	Infective endocarditis
	Myocarditis
	Pericardial effusion
	Hypertension
<b>VIII &amp; IX SEM RENAL AND BLOOD</b>	UTI
	Acute glomerulonephritis
	Nephrotic syndrome
	Acute kidney injury
	Chronic kidney disease -diagnosis and management
	Haemolytic uremic syndrome
	Renal Tubular Acidosis
	Obstructive uropathies
	RPGN
	Anaemia (General approach)
	Iron deficiency anaemia
	Haemolytic Anaemia
	Megaloblastic anaemia
	Aplastic anaemia
	Leukaemia / lymphoma
	Platelet disorders
<b>VIII &amp; IX SEM GIT AND CNS</b>	Acute hepatic failure
	Chronic liver disease
	Cirrhosis and portal hypertension
	Malabsorption syndromes and celiac disease
	Acute and chronic pancreatitis
	Wilson`s disease
	Approach to coma

	Seizure disorder - classification
	Seizure disorder - status epilepticus
	Febrile seizures
	Hydrocephalus
	Microcephaly
	Neural tube defects
	Guillain Barre syndrome
	Approach to floppy infant
	Cerebral palsy
<b>VIII &amp; IX SEM ENDOCRINE AND MISCELLANEOUS</b>	Hypothyroidism
	Diabetes Mellitus
	Diabetic ketoacidosis
	Delayed Puberty
	Precocious puberty
	Approach to DSD
	Hypoparathyroidism
	Diabetes insipidus
	Cushing syndrome
	Addison`s disease
	Approach to primary immunodeficiency
	Approach to IEM
	Approach to short stature
	Approach to arthritis, Juvenile idiopathic arthritis
	Pediatric SLE
	Scorpion sting
	Snake bite
	Down's syndrome and other trisomies
Common behavioural problems in children	



	Common child psychiatry problems- ADHD and autism
	Cleft lip/palate
	Anorectal malformations
	Undescended testis
<b>PSYCHIATRY</b>	
<b>VI SEM THEORY</b>	Introduction to Behavioral Medicine & Consultation-Liaison Psychiatry
	Introduction to Psychology,
	Learning Memory & Intelligence
	Organic psychiatric disorders
	Substance use disorders
	Anxiety disorders & Somatoform disorders
	Psychotic disorders
	Mood disorders
	Psychotropic Medications and Electroconvulsive Therapy
	Behavioural and Psychological Disorders in Children
	Psychiatric emergencies & Suicidal risk
<b>VI SEM CLINICS</b>	Overview of history and mental status examination in psychiatry
	Overview of psychotropic medications and demonstration of common adverse effects
	Screening for common mental disorders and substance use in general medical setting
	Assessment of patient with alcohol use problem
	Differentiating Organic and Functional psychiatric disorders – when to refer
	Diagnosing and Managing Common Mental Disorders – Depression & Anxiety
	Child psychiatry -History taking and visit to child guidance clinic
Understanding of Severe Mental Illness – Bipolar disorder & Schizophrenia – diagnosis and provision of ongoing care in community	

	Stress related disorders, crisis and problem solving
	Introduction to psychotherapy- including counseling, abreaction, brief therapy, behaviour and cognitive therapy for neurotic disorders
	Electroconvulsive Therapy & Repetitive Transcranial Magnetic Stimulation
	Assessment of Psychosomatic disorders and Anxiety
<b>ORTHOPAEDICS</b>	
<b>VI SEM</b>	General management of injuries
	General management of injuries
	Principles of fractures
	Principles of fractures
	Shoulder & arm injuries
	Elbow injuries
	Forearm injuries
	Wrist and hand injuries
	General management of spine and cervical spine injuries
	Thoraco lumber spine injuries
	Pelvic and acetabular injuries
	Fracture N.O.F. and I.T. fracture
	Hip Dislocation & Fracture S.O.F.
	Knee and leg injuries
Foot and ankle injuries	
<b>VIII SEM INFECTIONS</b>	Osteomyelitis
	Septic arthritis
<b>VIII SEM NON INFECTIVE ARTHRITIS</b>	Rheumatoid arthritis
	Seno negative arthritis
	Crystal deposition disorders
	Osteo arthritis
	Haemophilic arthropathy and neuropathic joint
	Osteonecrosis
	Osteochondrosis

<b>VIII SEM METABOLIC AND ENDOCRINE DISORDERS</b>	Bone Structure, Bone Remodeling, Regulation Of Bone Turnover & Mineral Exchange, Osteoporosis Management
	Rickets/Osteomalacia & Hyperpara Thyroidism
	Paget's Disease, Scurvy, Hyper Vitaminosis, Fluorosis And Endocrine Disorders
<b>VIII SEM GENETIC DISORDERS, SKELETAL DYSPLASIA AND MALFORMATION</b>	Skeletal dysplasia
	Connective tissue disorders
	Limb anomalies [PFFD, hemimelias]
<b>VIII SEM TUMOURS</b>	Introduction general principles staging and classification of tumours
	Benign lesion-I [osteochondroma, osteoblastoma, osteoid, osteofibrous dysplasia, enchondroma]
	Benign lesion-II [chondroblastoma, chondromyxoid fibroma, SBC, ABC, GCT]
	Chondrosarcoma & osteosarcoma
	Ewing's sarcoma, MFH, lymphoma
	Multiple myeloma, adamantinoma
<b>VIII SEM MODULE PRESENTATION</b>	Neck femur Fractures in adults - Anatomy, Classification and Management
	Rheumatoid Affections of Hand
	Gouty arthritis – Presentation and Management
	Osteoarthritis of Knee- Presentation and Management
	Frozen Shoulder
	Tennis Elbow
	Spine Involvement in Ankylosing Spondylitis
	Tuberculosis of Hip
	Tuberculosis of Shoulder
	Potts Spine - Clinical Presentation
	Tumors around Knee in Pediatric Patient
	SpinaVentosa
Carpal Tunnel Syndrome	

	DeQuervains Disease
	Hand in leprosy
	Sudecksosteodystrophy
	Osteoporosis and Bisphosphonates
	Pulled Elbow
	Congenital Radio Ulnar Synostosis
	Radial Club Hand
	Trendelenberg test
	Thomas Test
	Pathological Gait Patterns
	Slipped Capital Femoral Epiphysis
	Pathology and Clinical Features of CTEV
	Syndromic Associations of CTEV and CVT
	Congenital Pseudo Arthrosis of Tibia
	Tibial Hemimelia
	ORTHOPEDIC RADIOGRAPHS

### **PULMONARY MEDICINE**

<b>VI SEM</b>	Introduction to pulmonary medicine
	Primary Tuberculosis
	Post primary TB
	Diagnosis of TB
	RNTCP
	MDR TB
	Extra Pulmonary TB
	Bronchial Asthma
	ARDS
	COPD 1
	COPD2

	Pleural Diseases
	Pneumonia
	Pulmonary Embolism
	Suppurative Lung Diseases
	Examination
	ILD
	Occupational Lung Diseases
<b>DERMATOLOGY</b>	
<b>IV &amp; V SEM CLINICS</b>	History taking in dermatology
	Principles of diagnosis- morphology of lesions.
	Principles of diagnosis-distribution and signs
	History and Examination in Hansen's disease
	History taking and examination in STD
	Investigative procedures in dermatology-demonstrations
	Approach to genital ulcer disease
	Approach to urethral discharge
	Common infections – bacterial, viral
	Common fungal infections
	Infestations
<b>VI SEM</b>	Structure and function of skin with applied aspects
	Investigative procedures in dermatology
	Pyoderma
	Viral infections
	Superficial mycoses
	Deep mycoses
	Infestations
	Overview of eczema
	Contact dermatitis
	Atopic dermatitis
	Psoriasis with psoriatic arthritis
	Lichen planus

	Leprosy- clinical features and complications
	Leprosy- management
	Genital ulcers-Herpes genitalis, Chancroid, LGV, Donovanosis
	Syphilis-Clinical features
	Syphilis-Management
	Congenital syphilis
	Urethral discharge
	Group tasks- Papulosquamous disorder and STI
<b>VII SEM</b>	Vesiculobullous disorders (Pemphigus)
	Vesiculobullous disorders (Pemphigoid and dermatitis herpetiformis)
	Vaginal discharge- Candidiasis, Bacterial vaginosis, Trichomoniasis
	Bacterial infections- other than pyoderma
	Pruritus
	Urticaria and angioedema
	Drug eruptions
	Nutritional dermatoses
	Vitiligo, Ichthyosis
	Acne, alopecia
	Collagen vascular disorders- SLE
	Collagen vascular disorders- Systemic sclerosis and dermatomyositis
	Benign tumors of skin
	Non-melanoma skin cancers
	Cutaneous manifestations of HIV
	Topical therapeutics- Basic concepts
	Topical therapeutic agents
	Therapeutics- systemic drugs-corticosteroids and antihistamines
	Therapeutics- systemic drugs-antibiotics, antifungals, antivirals
	Therapeutics- systemic drugs-antileprosy drugs, ATT, cytotoxic drugs, photo-chemotherapy

## 4. TIME TABLE

### TOTAL TEACHING HOURS

Sl. No.	Subject Discipline	Total Teaching Hours (Including theory, Practical & Clinical posting)
1.	Medicine	828 hours
2.	Surgery	792 hours
3.	Obstetrics & Gynaecology	792 hours
4.	Paediatrics	304 hours
5.	Psychiatry	56 hours
6.	Orthopaedics	316 hours
7.	Pulmonary Medicine	56 hours
8.	Dermatology & STD	146 hours
9.	Anaesthesiology	56 hours

### WEEKLY TIMETABLES FOR MBBS PHASE IV- FINAL MBBS Part II

#### THEORY TIME TABLE- VIII SEMESTER

DAYS	8.00 A.M. to 9.00 AM	9 AM to 1 PM	2.00 P.M. to 3.00 P.M.	3.00 P.M. to 4.30 PM
<b>MONDAY</b>	Test / Paediatrics	C L I N I	Orthopaedics	Surgery Symposium
<b>TUESDAY</b>	Surgery		Paediatrics	Medicine Symposium
<b>WEDNESDAY</b>	Medicine		Obstetrics & Gynaecology	-----

<b>THURSDAY</b>	Surgery	<b>C S</b>	Paediatrics	Obstetrics & Gynaecology Symposium
<b>FRIDAY</b>	Obstetrics & Gynaecology		Orthopaedics	Operative Surgery
<b>SATURDAY</b>	Medicine			

**THEORY TIME TABLE IX SEMESTER**

<b>DAYS</b>	<b>8.00 A.M. to 9.00 AM</b>	<b>9 AM to 1 PM</b>	<b>2.00 P.M. to 3.00 P.M.</b>	<b>3.00 P.M. to 4.30 PM</b>
<b>MONDAY</b>	Paediatrics	<b>C L I N I C S</b>	Orthopaedics	Surgery Symposium
<b>TUESDAY</b>	Surgery		Paediatrics	Medicine Symposium
<b>WEDNESDAY</b>	Medicine		Obstetrics & Gynaecology	Operative Surgery
<b>THURSDAY</b>	Surgery		Paediatrics	Obstetrics & Gynaecology Symposium
<b>FRIDAY</b>	Obstetrics & Gynaecology		Paediatrics	--
<b>SATURDAY</b>	Medicine			----



## 5. EXAMINATION REGULATIONS

Final exit examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimum skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible. **Eligibility to appear for final exit examination for all the subjects include 75% attendance in theory, 75% attendance in practicals, 50% marks in theory internal assessment and 50% marks in practical internal assessment, duly certified by the concerned department HOD/ Faculty In-charge of examinations from the department.**

The candidates who lacks eligible attendance and/ or internal assessment marks will be detained. The detained candidates in phase IV has to improve the attendance and/or internal assessment by attending special classes/ notified tests within the period of next examination. Those candidates who fulfil the above said criteria alone will be permitted along with other candidates in the next examinations. Medical leave of absence of more than one month has to be certified by Medical board of JIPMER. Medical Leave more than three months, the candidate will be permitted to appear for examination. **Break in study more than three months will not be permitted under any circumstances.** The candidate will not be permitted to attend the final year MBBS part II examination, if they cross double the duration of study (MBBS course – 9 years from the date of joining)

Nature of questions will be structured essay, short answer type/objective type and marks for each part indicated separately.

Practical/clinical examinations will be conducted in the laboratories or hospital wards. The objective will be to assess proficiency and skill to conduct experiments, interpret data and form logical conclusion. Clinical cases kept in the examination must be common conditions that the student may encounter as a physician of first contact in the community. Rare syndromes and disorders are to be discouraged. Emphasis should be on candidate's capability in elicit a history demonstrate physical signs write a case record, analyze the case and develop a management plan.

Viva/oral includes assessment of management approach and handling of emergencies, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-Rays, identification of specimens, ECG, etc. also is to be assessed.

A student shall not be allowed to graduate later than 09 (nine) years of joining first

MBBS course (Double the duration of the course). The candidate's name will be struck off from the roll if he/she did not complete the entire course within the stipulation mentioned (Double the duration of the course).

<b>IV - PROFESSIONAL YEAR (FINAL MBBS - PART II)</b>			
<b>Name of the Subject</b>	<b>Evaluation parameter</b>	<b>Maximum Marks</b>	<b>Passing minimum</b>
<b>Medicine</b>	Written (2 Papers)	160	80
	Written including oral	180	90
	Practical	100	50
	Internal Assessment Theory	40	20
	Internal Assessment Practical	30	15
	<b>Overall (Total)</b>	<b>350</b>	<b>175</b>
<b>Surgery</b>	Written (2 Papers)	160	80
	Written including oral	180	90
	Practical	100	50
	Internal Assessment Theory	40	20
	Internal Assessment Practical	30	15
	<b>Overall (Total)</b>	<b>350</b>	<b>175</b>
<b>Obstetrics &amp; Gynaecology</b>	Written (2 Papers)	160	80
	Written including oral	180	90
	Practical	100	50
	Internal Assessment Theory	40	20
	Internal Assessment Practical	30	15
	<b>Overall (Total)</b>	<b>350</b>	<b>175</b>
<b>Paediatrics</b>	Written (1 Paper)	80	40
	Written including oral	100	50
	Practical	50	25
	Internal Assessment Theory	20	10
	Internal Assessment Practical	30	15
	<b>Overall (Total)</b>	<b>200</b>	<b>100</b>

### **Eligibility to appear for examination**

Attendance	= 75 %
Internal Assessment Marks	= 50%

### **Marks qualifying for pass**

- 50% in Theory
- 50% in Theory including Viva-Voce
- 50% in Practical
- 50% in Internal Assessment Theory
- 50% in Internal Assessment Practical
- 50% in Total Aggregate

**Students cannot appear in part or separately in individual subjects during the first appearance in professional examinations.**

**If the candidate fails in either theory or practical examination, he/she has to appear again for both theory and practical examination of the concerned subject.**

No grace marks will be allowed for any of the subjects of final MBBS part II

Re totalling of theory papers alone will be permitted and retotalling of practical marks is not permitted

Re-evaluation of theory papers will not be permitted under any circumstances. No precedence will be accepted in this regard.

No student shall be permitted to any one of the parts of MBBS examinations unless he/she has attended the course in the subjects for the prescribed period and produce the necessary certificate of study, attendance and progress from the head of the department.

**There shall be no condonation of lack of attendance, and the candidate who lacks attendance (75%) will be detained from appearing examination.**

## **6. LEARNING RESOURCE MATERIALS**

### **MEDICINE**

#### **TEXT BOOKS RECOMMENDED**

1. Principles and practice of Medicine by Davidson
2. Davidson's clinical cases by Mark W Stratchan and S. K. Sharma
3. Text Book of Medicine by Kumar and Clark
4. Clinical Medicine by Dr. K. V. Krishnadas
5. Macleods clinical examination
6. Hutchison's textbook of clinical methods

#### **REFERENCE TEXT BOOKS**

1. Harrison's Principles of Internal Medicine
2. Text Book of Medicine Cecil & Loeb

### **SURGERY**

#### **TEXT BOOKS RECOMMENDED**

1. Short practice of Surgery by Bailey and Love
2. Clinical Methods in Surgery by Das
3. Operative Surgery by Das

#### **REFERENCE TEXT BOOKS**

1. Physical signs in Clinical Surgery by Hamilton Bailey
2. Pye's Surgical Handicraft
3. Sabiston's Text Book of Surgery
4. Text book of Surgery, Cusher

### **ORTHOPAEDICS**

#### **TEXT BOOKS RECOMMENDED**

1. Graham Apley – System of Orthopaedics
2. Fracture and Joint injuries· -Watson Jones
3. Orthopaedics – Samuel F Turck
4. Mercer Orthopaedic Surgery
5. Outline of fractures - Adam's
6. Outline of orthopaedics – Adam's

7. Clinical Surgery – Das· -Chapter on Orthopaedics
8. Crawford Adam' s– Operative techniques (Orthopaedic)

### **REFERENCE TEXT BOOKS**

1. Campbell' s operative orthopaedics

## **OBSTETRICS AND GYNACOLOGY**

### **TEXT BOOKS RECOMMENDED**

1. Mudaliar and Menons Clinical Obstetrics 10th edition
2. Text book of Obstetrics by D C Dutta 6th edition (latest edition available)
3. Text book of Gynaecology by D C Dutta 4th edition(latest edition available)
4. Shaws Text book of Gynaecology 14th edition (latest edition available)
5. Text book of Obstetrics by Sheila Balakrishnan (Paras Publications )

### **REFERENCE TEXT BOOKS**

1. Williams obstetrics 23rd edition (MacGraw Hill)
2. Essentials of Gynaecology by Dr Lekshmy Sheshadri 1<sup>st</sup> edition (Published by Lippincott, Williams & Wilkins )

## **PEDIATRICS**

### **TEXT BOOKS RECOMMENDED**

1. Text Book of Paediatrics by O.P.Ghai
2. Clinical Examination in Paediatrics by Meharban Singh
3. Hutchison` s Clinical Methods
4. Clinical evaluation of new-born, infants and children by Dr. Sushama Bai
5. Care of Newborn by Meharban Singh
6. Nutrition & Child development by Dr. K. E. Elizabeth

### **REFERENCE TEXT BOOKS**

1. Text Book of Paediatrics by Nelson
2. IAP Text Book of Paediatrics
3. Social and Preventive Medicine by Park

## **Annexure- I – MODEL QUESTION PAPERS**

**GENERAL MEDICINE**

**Systemic Medicine**

**Paper - 1**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**

**Each Section to be answered in separate answer book**

**SECTION A**

1. A 45 year old male was admitted for acute onset retrosternal non exertional chest pain. He had presented to the hospital within two hours of onset of pain.
  - a) Discuss the diagnosis with the help of investigations. (3+2+5=10)
  - b) Mention the complications.
  - c) Outline the acute and long term management of this case.
  
2. Write notes on: (5x6=30)
  - a) Atypical pneumonia-causes and management.
  - b) Megaloblastic anemia - causes and management.
  - c) Clinical features and management of pericardial tamponade.
  - d) Management of generalised myasthenia gravis.
  - e) G6PD deficiency.

**SECTION B**

3. Discuss the clinical manifestations, complications, investigations and therapy of Grave's disease. (3+2+2+3=10)
  
4. Write notes on: (5x6=30)
  - a) Falls in elderly- causes and prevention.
  - b) Mitochondrial DNA- structure, inheritance and disorders.
  - c) Management of Diabetic ketoacidosis.
  - d) Management of gout.
  - e) Obstructive sleep apnoea.

## **GENERAL MEDICINE**

Systemic Medicine including Infections, Tropical Medicine, Psychiatry and Dermatology

### **Paper - 2**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**  
**Each Section to be answered in separate answer book**

### **SECTION A**

1. A 30 year old migrant labourer presented with fever, headache, vomiting for six weeks, altered sensorium of six days and right sided hemiplegia. (2+3+5=10)
  - a) Mention the diagnostic possibilities.
  - b) Outline the investigations.
  - c) Discuss the complications and management.
  
2. Write notes on: (5x6=30)
  - a) Lathyrism: cause, manifestations, prevention.
  - b) Paraquat poisoning – manifestations & treatment.
  - c) Clinical features & management of severe falciparum malaria.
  - d) Anaphylactic shock-causes and management.
  - e) Metabolic syndrome: Components & treatment.

### **SECTION B**

3. Discuss the genetics, pathology, clinical features and management of Wilson's disease. (2+2+2+4=10)
  
4. Write notes on: (5x6=30)
  - a) Substance abuse.
  - b) Heat stroke.
  - c) Extraintestinal amebiasis.
  - d) Condyloma lata.
  - e) Brucellosis – manifestation & treatment.



**GENERAL SURGERY**

**Paper - 1**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**

**Each Section to be answered in separate answer book**

**SECTION A**

**General Surgery including trauma**

1. A 55-year-old man presents to the outpatient department with a gradually increasing swelling on the left side of the neck for three months duration. On examination the swelling is 10 cms in size and firm in consistency. (3+7=10)
  - a) Enumerate the causes that could lead to this presentation.
  - b) How will you investigate and manage this patient?
  
2. Write short notes on: (5x6=30)
  - a) Lasers in surgery.
  - b) Blood products and indications for their transfusions.
  - c) Total Parenteral Nutrition.
  - d) Marjolin's ulcer.
  - e) Vacuum-assisted closure for wounds.

**SECTION B**

**Orthopaedic Surgery**

3. Discuss the clinical features, radiological appearance and management of Osteosarcoma? (3+3+4=10)
  
4. Write short notes on: (5x6=30)
  - a) Monteggia fracture.
  - b) Open fractures.
  - c) Total Knee Replacement.
  - d) Fracture Scaphoid.
  - e) Treatment of spinal tuberculosis with paraplegia.

**GENERAL SURGERY**

**Paper - 2**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**

**Each Section to be answered in separate answer book**

**SECTION A**

**General Surgery including Gastroenterology, Breast and Endocrine Surgery**

1. A 45-year-old lady presents with a history of progressive dysphagia for three months' duration. (2+3+5=10)
  - a) Enumerate the causes.
  - b) How will you investigate?
  - c) Discuss briefly the management.
  
2. Write short notes on: (5x6=30)
  - a) Endoscopic retrograde Cholangiopancreatography (ERCP).
  - b) Treatment of papillary thyroid cancer.
  - c) Inflammatory Breast Cancer.
  - d) Salmon Goodsall's rule.
  - e) Treatment of rectal prolapse.

**SECTION B**

**General Surgery including Genitourinary Surgery, Head and Neck and Allied Specialities**

3. Classify salivary gland tumours. Discuss pathology, clinical features, diagnosis and treatment of pleomorphic adenoma of parotid. (3+3+4=10)
  
4. Write short notes on: (5x6=30)
  - a) Tubercular lymphadenopathy.
  - b) Electrical burns.
  - c) Seminoma of testis.
  - d) Anaesthesia for repair of hernia.
  - e) Hypospadiasis.

**OBSTETRICS AND GYNAECOLOGY**  
**Obstetrics including Social Obstetrics**

**Paper - 1**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**  
**Each Section to be answered in separate answer book**

**SECTION A**

1. Enumerate the causes of Convulsions during Pregnancy. Discuss the management of Eclampsia in a woman at 32 weeks of Pregnancy. (3+7=10)
2. Write short notes on: (5x6=30)
  - a) Parenteral iron therapy.
  - b) Elderly Primigravida.
  - c) Management of hyperemesis gravidarum.
  - d) Management of ruptured ectopic pregnancy.
  - e) Breech presentation.

**SECTION B**

3. Write the haematological changes in pregnancy? How is bleeding controlled after vaginal delivery? Write the management of atonic PPH. (2+3+5=10)
4. Write short notes on: (5x6=30)
  - a) Zika virus infection in pregnancy.
  - b) Meconium aspiration syndrome.
  - c) Preconceptional counselling in a diabetic women.
  - d) Diagnosis of Preterm labor.
  - e) Screening for GDM.

**OBSTETRICS AND GYNAECOLOGY**  
**Gynaecology including Family Welfare and Demography**

**Paper - 2**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**  
**Each Section to be answered in separate answer book**

**SECTION A**

1. A severely anaemic 45 year old female came to Gynae OPD with Menorrhagia. On examination she was found to have an irregular uterine mass and uterus was of 16 weeks size. Write differential diagnosis and management. (3+7=10)
2. Write short notes on: (5x6=30)
  - a) Bacterial Vaginosis.
  - b) CA 125.
  - c) Treatment for genital Tuberculosis.
  - d) Tubal patency tests.
  - e) Medical management of DUB.

**SECTION B**

3. Discuss the differential diagnosis of adnexal mass in a 17 year old girl .Discuss the management as per the etiology. (4+6=10)
4. Write short notes on: (5x6=30)
  - a) Sterilisation guidelines of India.
  - b) Medical abortion.
  - c) Screening for Endometrial cancer.
  - d) Non contraceptive benefits of OCP.
  - e) Differential diagnosis for mass descending per vaginum.

## **PAEDIATRICS**

Time: Three Hours

Maximum Marks: 80

**Answer ALL Questions**  
**Each Section to be answered in separate answer book**

### **SECTION A**

1. A term baby presented with pus discharge from the umbilicus and lethargy with no urine output for the last 12 hours on day 9 of life. Outline the differential diagnoses, investigations, management and prevention. (2+4+2+2=10)
2. Write short notes on: (5x6=30)
  - a) Management of snake bite with ptosis.
  - b) Thalassemia: Diagnosis and treatment.
  - c) Define community acquired pneumonia. Elaborate the WHO classification of pneumonia for 1 to 5 years old children. (2+4=6)
  - d) What are the clinical features of Rickets? Outline the management of rickets in a five years old child. (3+3=6)
  - e) Management of bronchiolitis in a 5 months old baby.

### **SECTION B**

3. Outline the differential diagnoses, investigations & management of Tuberculous meningitis? (3+4+3=10)
4. Write short notes on: (5x6=30)
  - a) SAM (Severe acute malnutrition).
  - b) Management of dengue shock syndrome.
  - c) Clinical features of untreated congenital hypothyroidism.
  - d) Treatment of cyanotic spell and its prevention. (4+2=6)
  - e) Kerosene aspiration: Complications and management. (2+4=6)