

Curriculum

**Course: Bachelor of Medicine &
Bachelor of Surgery (M.B.B.S.)**

Year: Third Professional Part II (Final Professional)

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General Consideration and Examination Regulation

Third Professional Part II of the Bachelor of Medicine & Bachelor of Surgery (M.B.B.S.) course comprises of mainly of 4 subjects namely Medicine & allied, Surgery & allied, Obstetrics and Gynaecology and Paediatrics. It includes 8th and 9th semester of MBBS teaching and the final professional university examination is conducted at the end of 9th semester.

Examination Regulations:

Essentialities for qualifying to appear in professional examinations.

The performance in essential components of training are to be assessed, based on:

(1) **ATTENDANCE:**

75% attendance in each subject for appearing in the examination is compulsory inclusive of attendance in non-lecture teaching i.e. seminars, group discussions, tutorials, demonstrations, practicals, hospital (Tertiary, secondary, primary) posting and bed side clinics etc.

(2) **INTERNAL ASSESSMENT:**

(i) It shall be based on day to day assessment (see note), evaluation of student assignment, preparation for seminar, clinical case presentation etc.:

(ii) Regular periodical examinations shall be conducted throughout the course. The question of number of examinations is left to the institution:

(iii) Day to day records should be given importance during internal assessment.

(iv) Weightage for the internal assessment shall be 20% of the total marks in each subject.

(v) **Student must secure at least 35% marks of the total marks fixed for internal assessment in a particular subject in order to be eligible to appear in final university examination of that subject.**

Note:

Internal assessment shall relate to different ways in which student's participation in learning process during semester's is best evaluated.

Some examples are as follows:

(i) Preparation of subject for students seminar.

(ii) Preparation of a clinical case for discussion.

(iii) Clinical case study/problem solving exercise.

(iv) Participation in Project for health care in the community (planning stage to evaluation).

(v) Proficiency in carrying out a practical or a skill in small research project.

(vi) Multiple choice questions (MCQ) test after completion of a System/teaching.

Each item tested shall be objectively assessed and recorded. Some of the items can be assigned as Home work/Vacation work.

(3) Passing in Illrd Professional (Part-1) is compulsory for being eligible for Illrd Professional (Part II) examination

UNIVERSITY EXAMINATIONS:

Theory papers will be prepared by the examiners as prescribed. Nature of questions will be short answer type/objective type and marks for each part indicated separately.

Practicals/clinical will be conducted in the laboratories or hospital wards. Objective will assess proficiency in skills, conduct of experiment, interpretation of data and logical conclusion. Clinical cases should preferably include common diseases not esoteric syndromes or rare disorders. Emphasis should be on candidate's capability in eliciting physical signs and their interpretation.

Viva/oral includes evaluation of management approach and handling of emergencies. Candidate's skill in interpretation of common investigative data, x-rays, identification of specimens, ECG, etc. also is to be evaluated.

The examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary for knowledge, minimum skills along with clear concepts of the fundamentals which are necessary for him to carry out his professional day to day work competently. Evaluation will be carried out on an objective basis.

Question papers should preferably be of short structure/objective type.

Clinical cases/practicals shall take into account common diseases which the student is likely to come in contact in practice. Rare cases/obscure syndromes, long cases of neurology shall not be put for final examination.

During evaluation (both Internal and External) it shall be ascertained if the candidate has acquired the skills as detailed. There shall be one main examination in a year and a supplementary to be held not later than 6 months after the publication of its results.

Third Professional :-

Part II-(Final Professional) Examination– At the end of Phase III training in the subjects of Medicine, Surgery, Obstetrics & Gynecology and Paediatrics.

**CURRICULUM
OF Subject**

**MEDICINE AND ITS
ALLIED SPECIALITIES**

THIRD M.B.B.S.(PART- II)

Curriculum of Medicine & its allied specialities

Medicine and allied specialities includes subjects – (A) MEDICINE, (B) DERMATOLOGY AND SEXUALLY TRANSMITTED DISEASES, (C) PSYCHIATRY (D) TUBERCULOSIS AND CHEST DISEASES

(A) MEDICINE:

I) GOAL:

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

ii) OBJECTIVES

(a) KNOWLEDGE

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

- (1) To 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.

b. SKILLS;

At the end of the course, the student should 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 haemogram, 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.

c. INTEGRATION;

(1) With community medicine and physical medicine and rehabilitation to have the knowledge and be able to manage important current national health programs, also to be able to view the patient in his/her total physical, social and economic milieu.

(2) With other relevant academic inputs which provide scientific basis of clinical medicine e.g. anatomy, physiology, biochemistry, microbiology, pathology and pharmacology.

(B) DERMATOLOGY AND SEXUALLY TRANSMITTED DISEASES

I) GOAL:

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

ii) OBJECTIVES:

a. KNOWLEDGE:

At the end of the course of Dermato-S.T.D. and Leprology, 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 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 the medical and surgical procedures available for the treatment of various diseases and to offer a comprehensive plan of management for a given disorder;

b. SKILLS:

The student should 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 office procedures required for making the bedside 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;
6. Assist in the performance of common procedures, like laryngoscopic examination, pleural aspiration, respiratory physiotherapy, laryngeal intubation and pneumothoracic 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 & Social Medicine.

(C) PSYCHIATRY

i) GOAL

The aim of teaching 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 manifestations of common disorders and rare psychiatric disorders to the specialist.

ii) OBJECTIVES

a. KNOWLEDGE

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

- (1) Comprehend 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 should 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 should 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 advance cases to a specialised Psychiatry/Mental Hospital. Training should be integrated with the departments of Medicine, Neuro Anatomy, Behavioral Sciences and Forensic medicine.

Medicine Syllabus

1. Introduction to clinical medicine
 - 1.1 Practice of medicine
 - 1.2 Global issues in medicines
 - 1.3 Decision making in clinical medicine.
 - 1.4 Screening and prevention of disease.
 - 1.5 Principles of clinical pharmacology
 - 1.6 Woman's health
 - 1.7 Medical disorders during pregnancy
 - 1.8 Medical evaluation of surgical patients
 - 1.9 Palliative and end of life care
 - 1.10 Safety and quality of healthcare.
2. Cardinal manifestations and presentation of diseases.
 - 2.1 Pain
 - 2.1.1 Pathophysiology and management
 - 2.1.2 Chest discomfort
 - 2.1.3 Abdominal pain
 - 2.1.4 Headache
 - 2.1.5 Backache and neck pain
 - 2.2 Alteration in body temperature
 - 2.2.1 Fever and hyperthermia
 - 2.2.2 Fever and rash
 - 2.2.3 PUO
 - 2.2.4 Hypothermia and frost bite
 - 2.3 Nervous system dysfunction
 - 2.3.1 Syncope
 - 2.3.2 Dizziness and vertigo
 - 2.3.3 Weakness and paralysis

- 2.3.4 Numbness tingling and sensory loss
- 2.3.5 Gait and balance disorders
- 2.3.6 Confusion and delirium
- 2.3.7 Aphasia, memory loss and other focal cerebral disorders
- 2.3.8 Sleep disorders
- 2.4 Disorders of eye, ear, nose and throat
 - 2.4.1 Disorders of eye
 - 2.4.2 Disorders of smell and taste
 - 2.4.3 Disorders of hearing
 - 2.4.4 Pharyngitis, sinusitis, otitis and other respiratory tract infections
 - 2.4.5 Oral manifestations of disease
- 2.5 Alterations in circulatory and respiratory functions
 - 2.5.1 Dyspnea
 - 2.5.2 Cough and hemoptysis
 - 2.5.3 Hypoxia and cyanosis
 - 2.5.4 Edema
 - 2.5.5 Palpitations
- 2.6 Alterations in gastrointestinal function
 - 2.6.1 Dysphagia
 - 2.6.2 Nausea and vomiting
 - 2.6.3 Indigestion
 - 2.6.4 Diarrhoea
 - 2.6.5 Constipation
 - 2.6.6 GI bleeding
 - 2.6.7 Jaundice
 - 2.6.8 Abdominal swelling
 - 2.6.9 Ascites
- 2.7 Alterations in renal and urinary tract function
 - 2.7.1 Azotemia and urinary abnormalities
 - 2.7.2 Fluid and electrolyte disturbances
 - 2.7.3 Hyper and hypocalcemia
 - 2.7.4 Acidosis and alkalosis
- 2.8 Alterations in sexual function and reproduction
 - 2.8.1 Sexual dysfunction
 - 2.8.2 Hirsutism
 - 2.8.3 Virilization
 - 2.8.4 Menstrual disorders
 - 2.8.5 PID
- 2.9 Alterations in skin
 - 2.9.1 Approach to patient with skin disorders
 - 2.9.2 Eczema
 - 2.9.3 Psoriasis
 - 2.9.4 Cutaneous infections
 - 2.9.5 Acne and other common skin disorders
 - 2.9.6 Skin manifestations of internal disease
 - 2.9.7 Immunologically mediated skin diseases
 - 2.9.8 Cutaneous drug reactions
 - 2.9.9 Photosensitivity
- 2.10 Hematologic alterations
 - 2.10.1 Anemia

- 2.10.2 Polycythemia
- 2.10.3 Bleeding
- 2.10.4 Thrombosis
- 2.10.5 Enlargement of lymph nodes and spleen
- 2.10.6 Disorders of granulocytes and monocytes
- 3. Genes, the environment and disease
 - 3.1 Principles of human genetics
 - 3.2 Chromosome disorders
 - 3.3 Practice of genetics in clinical medicine
 - 3.4 Human microbiome
- 4. Regenerative medicine
 - 4.1 Stem cell biology
 - 4.2 Hemopoietic stem cells
 - 4.3 Applications of stem cell biology in clinical medicine
 - 4.4 Gene therapy
 - 4.5 Tissue engineering
- 5. Aging
 - 5.1 World demography of aging
 - 5.2 The biology of aging
 - 5.3 Clinical problems of aging
- 6. Nutrition
 - 6.1 Nutrient requirement and dietary assessment
 - 6.2 Vitamin and trace mineral deficiencies and excess
 - 6.3 Malnutrition and nutritional assessment
 - 6.4 Enteral and parenteral nutrition therapy
 - 6.5 Biology of obesity
 - 6.6 Evaluation and management of obesity
 - 6.7 Eating disorders
 - 6.8 Involuntary weight loss
- 7. Oncology and hematology
 - 7.1 Neoplastic disorders
 - 7.1.1 Approach to patient with cancer
 - 7.1.2 Prevention and early detection of cancer
 - 7.1.3 Neoplasms of lung
 - 7.1.4 Breast cancer
 - 7.1.5 Cancer of liver and biliary tree
 - 7.1.6 Cancer of Prostate
 - 7.1.7 Testicular cancer
 - 7.1.8 Gynecological malignancies
 - 7.1.9 Paraneoplastic syndromes
 - 7.1.10 Late consequences of cancer and its treatment
 - 7.2 Hematopoietic Disorders
 - 7.2.1 Iron deficiency and other hypoproliferative anemias
 - 7.2.2 Disorders of haemoglobin
 - 7.2.3 Megaloblastic anemias
 - 7.2.4 Hemolytic anemias
 - 7.2.5 Anemia due to blood loss
 - 7.2.6 Aplastic anemia
 - 7.2.7 Myelodysplasia
 - 7.2.8 Polycythemia vera

- 7.2.9 Myeloproliferative disorder
- 7.2.10 Acute and chronic myeloid leukemia
- 7.2.11 Malignancies of lymphoid cells
- 7.2.12 Plasma cell disorders
- 7.2.13 Amyloidosis
- 7.2.14 Transfusion biology and therapy
- 7.2.15 Hematopoietic cell transplantation
- 7.3 Disorders of hemostasis
 - 7.3.1 Disorders of platelets and vessel wall
 - 7.3.2 Coagulation disorders
 - 7.3.3 Arterial and venous thrombosis
 - 7.3.4 Anti platelets , anti coagulants and anti fibrinolytic drugs
- 8. Infectious diseases
 - 8.1 Basic considerations
 - 8.2 Clinical syndromes
 - 8.2.1 Infective endocarditis
 - 8.2.2 Infections of soft tissue, skin and muscles
 - 8.2.3 Diarrhea
 - 8.2.4 Bacterial food poisoning
 - 8.2.5 Cl. Difficile and Pseudomembranous colitis
 - 8.2.6 STI
 - 8.3 Healthcare associated infections
 - 8.4 Infections in transplant recipients
 - 8.5 Gram positive infections
 - 8.6 Gram negative infections
 - 8.7 Mycobacterial infections
 - 8.8 Spirochetal infections
 - 8.9 Viral infections
 - 8.10 Infections due to DNA viruses
 - 8.11 Infections due to RNA viruses
 - 8.12 Infections due to respiratory viruses
 - 8.13 Infections due to HIV and other retro viruses
 - 8.14 Fungal infections
 - 8.15 Protozoal and helminthic infections
- 9. Terrorism and clinical medicine
 - 9.1 Microbial
 - 9.2 Chemical
 - 9.3 Radiation
- 10. Disorders of cardio vascular system
 - 10.1 Introduction to CVS disorders
 - 10.2 Diagnosis
 - 10.2.1 Physical examination
 - 10.2.2 ECG
 - 10.2.3 Non invasive MRI CT ECHO
 - 10.2.4 Invasive CAG
 - 10.3 Disorders of rhythm
 - 10.3.1 Tachyarrhythmias
 - 10.3.2 Bradyarrhythmias
 - 10.4 Disorders of heart
 - 10.4.1 Heart failure

- 10.4.2 Corpulmonale
- 10.4.3 Valvular heart disease
- 10.4.4 Cardiomyopathy
- 10.4.5 Pericardial disease
- 10.5 Vascular diseases
 - 10.5.1 Atherosclerosis
 - 10.5.2 Metabolic syndromes
 - 10.5.3 IHD
 - 10.5.4 Htn
 - 10.5.5 Pulmonary HTn
 - 10.5.6 PVD
 - 10.5.7 Disorders of Aorta
- 11. Disorders of respiratory system
 - 11.1 Introduction
 - 11.2 Diseases
 - 11.2.1 Asthma
 - 11.2.2 Hypersensitivity
 - 11.2.3 Occupational lung dis.
 - 11.2.4 Pulmonary Tuberculosis
 - 11.2.5 Pneumonia
 - 11.2.6 Bronchiectasis
 - 11.2.7 Lung abscess
 - 11.2.8 Cystic fibrosis
 - 11.2.9 COPD
 - 11.2.10 ILD
 - 11.2.11 DVT PT.
 - 11.2.12 Disorder of Pleura and Mediastinum
 - 11.2.13 Disorders of ventilation
 - 11.2.14 Sleep apnea
 - 11.2.15 Lung transplantation
- 12. Critical care medicine
 - 12.1 Respiratory critical care
 - 12.1.1 Approach
 - 12.1.2 ARDS
 - 12.1.3 Mechanical ventilation
 - 12.2 Shock and cardiac arrest
 - 12.2.1 Approach
 - 12.2.2 Septic shock
 - 12.2.3 Cardiogenic shock
 - 12.2.4 Pulmonary edema
 - 12.2.5 Cardiovascular collapse
 - 12.2.6 Sudden cardiac death
 - 12.2.7 Cardiac arrest
 - 12.3 Neurologic critical care
 - 12.3.1 Coma
 - 12.3.2 HIE
 - 12.3.3 SAH
 - 12.4 Oncologic emergencies
- 13. Disorders of kidney and urinary system
 - 13.1 Biology

- 13.2 Renal injury
- 13.3 AKD
- 13.4 CKD
- 13.5 Dialysis
- 13.6 Transplantation
- 13.7 Glomerular diseases
- 13.8 PKD
- 13.9 Tubular diseases
- 13.10 Interstitial diseases
- 13.11 Vascular injury
- 13.12 Nephrolithiasis
- 13.13 Pyelonephritis
- 13.14 UTI
- 13.15 Prostatitis
- 13.16 Obstruction
- 13.17 Painful bladder syndrome
- 14. Disorders of GIT
 - 14.1 Disorders of Alimentary tract
 - 14.1.1 Approach
 - 14.1.2 GI endoscopy
 - 14.1.3 Disorders of Esophagus
 - 14.1.4 Peptic ulcer
 - 14.1.5 Disorders of absorption
 - 14.1.6 IBD
 - 14.1.7 IBS
 - 14.1.8 Diverticular diseases
 - 14.1.9 Anorectal diseases
 - 14.1.10 Mesenteric vascular insufficiency
 - 14.1.11 Acute intestinal obstruction
 - 14.1.12 Acute appendicitis
 - 14.1.13 Peritonitis
 - 14.2 Disorders of Liver and biliary tract
 - 14.2.1 Approach
 - 14.2.2 LFT
 - 14.2.3 The hyperbilirubinaemia
 - 14.2.4 Acute viral hepatitis
 - 14.2.5 Drug induced hepatitis
 - 14.2.6 Chronic hepatitis
 - 14.2.7 Alcoholic liver Ds
 - 14.2.8 Cirrhosis
 - 14.2.9 Liver biopsy
 - 14.2.10 Liver transplantation
 - 14.2.11 Disorders of gall bladder and bile duct
 - 14.3 Disorders of Pancreas
 - 14.3.1 Approach
 - 14.3.2 Acute pancreatitis
 - 14.3.3 Chronic pancreatitis
- 15. Disorders of joint and adjacent tissues
 - 15.1 The immune system
 - 15.1.1 Introduction

- 15.1.2 MHC
- 15.1.3 Primary immune deficiency diseases
- 15.2 Disorders of immune mediated injury
 - 15.2.1 Allergies
 - 15.2.2 Anaphylaxis
 - 15.2.3 Autoimmune diseases
 - 15.2.4 Systemic macrocytosis
 - 15.2.5 SLE
 - 15.2.6 APLA
 - 15.2.7 RA
 - 15.2.8 ARF
 - 15.2.9 Systemic sclerosis
 - 15.2.10 Sjogren diseases
 - 15.2.11 The spondyloarthritis
 - 15.2.12 Vasculitis syndrome
 - 15.2.13 Behchet syndrome
 - 15.2.14 Relapsing polychondritis
 - 15.2.15 Sacroidosis
 - 15.2.16 Familial mediterrian fever
- 15.3 Disorders of Joint
 - 15.3.1 Musculoskelatal disorders
 - 15.3.2 OA
 - 15.3.3 Gout
 - 15.3.4 Infectious arthritis
 - 15.3.5 Fibromyalgia
 - 15.3.6 Periarticular diseases.
- 16. Endocrinology and metabolism
 - 16.1 endocrinology
 - 16.1.1 Basic principles
 - 16.1.2 Anterior pituitary
 - 16.1.3 Hypothalamus
 - 16.1.4 Disorders of neurohypophysis
 - 16.1.5 Disorders of thyroid gland
 - 16.1.6 Pheochrmocytoma
 - 16.1.7 DM
 - 16.1.8 Hypoglycemia
 - 16.1.9 Testis
 - 16.1.10 Male reproductive system
 - 16.1.11 Female reproductive system
 - 16.1.12 Infertility
 - 16.1.13 Menopause
 - 16.1.14 Endocrine tumours
 - 16.2 Disorders of bone and mineral metabolism
 - 16.2.1 Basic
 - 16.2.2 Disorders of parathyroid gland
 - 16.2.3 Calcium homeostasis
 - 16.2.4 Osteoporosis
 - 16.2.5 Paget's disease.
 - 16.3 Disorders of intermediary metabolism
 - 16.3.1 Liprotein metabolism

- 16.3.2 Hemochromatosis
- 16.3.3 The porphyrias
- 16.3.4 Purine and pyrimidine metabolism
- 16.3.5 Wilson disease
- 16.3.6 Lysosomal storage disease
- 16.3.7 Carbohydrate metabolism
- 16.3.8 GSDs
- 16.3.9 Heritable Disorders of connective tissue
- 16.3.10 Inherited Disorders of amino acids
- 16.3.11 Inherited Disorders of membrane transport
- 17. Neurologic Disorders
 - 17.1 Diagnosis of neurologic diseases
 - 17.1.1 Biology
 - 17.1.2 Approach
 - 17.1.3 Neurologic screening
 - 17.1.4 Neuroimaging
 - 17.1.5 EEG
 - 17.1.6 EMG
 - 17.1.7 Lumbar puncture
 - 17.2 Diseases of CNS
 - 17.2.1 Seizures and epilepsy
 - 17.2.2 Stroke
 - 17.2.3 Dementia
 - 17.2.4 Parkinson's disease
 - 17.2.5 Movement disorders
 - 17.2.6 Ataxic disorders
 - 17.2.7 Amyotrophic lateral sclerosis
 - 17.2.8 MNDs
 - 17.2.9 Disorders of ANS
 - 17.2.10 Trigeminal neuralgia
 - 17.2.11 Cranial nerve disorder
 - 17.2.12 Disorders of spinal cord
 - 17.2.13 Concussion and head injuries
 - 17.2.14 Metastatic tumour of nervous system
 - 17.2.15 Demyelinating disorders
 - 17.2.16 Multiple sclerosis
 - 17.2.17 Meningitis
 - 17.2.18 Encephalitis
 - 17.2.19 Brain abscess
 - 17.2.20 Empyema
 - 17.2.21 Prion disease
 - 17.3 Nerve and muscle disorder
 - 17.3.1 Peripheral neuropathy
 - 17.3.2 GBS
 - 17.3.3 Myasthenia gravis
 - 17.3.4 Muscular dystrophies
 - 17.3.5 Polymyositis
 - 17.3.6 Inclusion body myositis
 - 17.4 Chronic fatigue syndrome
 - 17.5 Psychiatric disorders

- 17.5.1 Basic
- 17.5.2 Mental disorder
- 17.6 Alcoholism and drug dependency
 - 17.6.1 Alcoholism
 - 17.6.2 Opioid drug abuse
 - 17.6.3 Cocaine
 - 17.6.4 Nicotine addiction
- 18. Poisoning drug over dose and envenomation
 - 18.1 Heavy metal poisoning
 - 18.2 Poisoning and drug overdose
 - 18.3 Snake bite
 - 18.4 Ectoparasite infestation
- 19. High altitude and decompression sickness
 - 19.1 Altitude illness
 - 19.2 Hyperbaric and diving medicine
- 20. Environmental medicine

RECOMMENDED TEXT BOOKS:-

REFERENCE BOOKS:-

1. Principles of internal Medicine 19th edition by Harrison
2. Davidson
3. API
4. Golwala
5. G.G. Oza
6. P.J. Mehta
7. Mathews
8. Clinical diagnosis by Hutchisons

Unit Management

Total Unit – V

	OPD	EMERGENCY	WARD
UNIT - I	Monday	Monday	Rest all days
UNIT- II	Tuesday	Tuesday	Rest all days
UNIT- III	Wednesday	Wednesday	Rest all days
UNIT - I	Thursday	Thursday	Rest all days
UNIT - IV	Friday	Friday	Rest all days
UNIT - V	Saturday	Saturday	Rest all days

Note: - Sunday emergency will be done by Rotation.

Posting 5 :- 26 Weeks

Posting	Weeks	Semester
1 st	6	3 rd Semester II/I MBBS
2 nd	4	5 th Semester II/III MBBS
3 rd	4	7 th Semester III/I MBBS
4 th	6	8 th Semester III/II MBBS
5 th	6	9 th Semester III/II MBBS

Clinical Posting Schedule of Batches:

(Batch is known by year of Admission at 1st MBBS e.g. August 2012)

Total students: divided into 3 groups – A, B, C,

Division of Groups: Batches (A, B, C,) subdivided into

A-1, A-2

B-1, B-2

C-1, C-2

Rotation:

Posting Detail Unit Wise (Rotated every six months)

Posting	Batch (A-1,B-1,C-1)	Batch (A-2,B-2,C-2)
First Posting	Unit – 1	Unit – 2
Second Posting	Unit – 3	Unit – 4
Third Posting	Unit – 5	Unit – 1
Forth Posting	Unit – 1	Unit – 2
Fifth Posting	Unit – 3	Unit – 4

Syllabus for Ward Posting

1. Ward posting 1
 - a. Bio data and history taking
 - b. Common symptoms CVS, RS and GIT.
2. Ward posting 2
 - a. Revision of previous posting.
 - b. General examination.
 - c. Systemic examination of CVS, RS and GIT
3. Ward posting 3
 - a. Revision of previous posting.
 - b. Symptomatology of CNS
 - c. Systemic examination of CNS
4. Ward posting 4
 - a. Investigations and treatment of common medical conditions
 - b. Common medical emergencies
 - c. Common procedures: pleural and ascetic tapping, lumbar puncture etc
5. Ward posting 5
 - a. Revision of all previous posting.

Teaching:

1. Clinical postings as per chart attached.
2. Theory lectures, demonstrations and Seminars etc. in addition to clinical postings as under. The clinical lectures to be held from 4th Semester onwards.
3. There should be minimum 300 hrs of teaching in Medicine.

Examinations & Structure of Paper:

➤ For Internal examination:

1. Two Internal Theory Examinations
2. One paper for each Examination. One paper ; 3 hrs ; 60 marks
3. 1st internal examination conducted at the Beginning of 8th Semester
 - Syllabus: General Medicine including
 - I. Cardiovascular system,
 - II. Respiratory system
 - III. Symptomatology
 - IV. Infectious diseases.
4. 2nd internal examination conducted at the Beginning of 9th Semester
 - Syllabus:
 - i. Endocrinology
 - ii. Fluid electrolyte balance.
 - iii. GIT
 - iv. CNS
 - v. Fluid electrolyte balance
 - vi. Renal system

Note: Best of two will be considered for internal assessment for Theory Marks

➤ Ward ending exam at end of each clinical posting.

Case	Table	Total 30 marks of each clinical posting	Weightage for Internal Practical Marks Calculation
20 marks	10 marks		2 Marks

➤ For preliminary papers :

1. Two papers (I & II). 3hrs: 60marks each
2. Paper pattern is the same as university exam.
 - a. Time duration 3 hrs and 60 marks for each paper
 - b. Syllabus: Whole course as in university examinations

➤ **Students' Evaluation Card of Medicine**

Name of Student- ABC								
Batch- 2015								
Roll number: 000								
Semester	Theory Attendance	Ward postings	Ward attendance	Ward Ending marks	Theory exams	Theory marks	HOU sign	HOD sign
3		1						
4								
5		2						
6								
7		3			1			
8		4			2			
9		5			3			

Internal marks calculations and distributions

- Internal assessment for medicine will include skin, psychiatry, TB chest & casualty posting.
- Total internal Marks are 60 (Theory=30 and Practical=30)
- Student should obtain minimum 35% of total internal marks (i.e. 21 marks) to be eligible to appear for final university examination.

		Marks	
		Practical	Theory
I.	Internal Exam		
	(1) Medicine	10 (2 marks for each clinical posting as per ward ending exam)	05 (Internal Theory exam 1 & 2) Best one of the two
	(2) Skin	2.5	2.5
	(3) Psychiatry	2.5	2.5
	Total	15	10
II.	Preliminary Exam	10	10
III.	Attendance	05 (attendance of 5 clinical posting)	05 (attendance for theory lectures)
	Day to day assessment	-	05
	Grand total (I+II+III)	30 Marks	30 Marks

➤ University examination.

Marks Allotted

Theory- Two papers of 60 marks each 120 marks

Paper 1- General Medicine

Paper II- General Medicine (including Psychiatry, Dermatology and S.T.D.)

(Shall contain one question on basic sciences and allied subjects)

Internal assessment 60 marks (Theory-30; Practical-30)

Total 300 marks

No	Name of Examination	Paper 1 marks	Paper 2 marks	Oral (Viva) Interpretation of X-ray ECG, etc.	Total marks	Internal assessment marks	Grand Total
1	Theory	60	60	20	140	30	300
2	Clinical (Bed side)				100	30	

Paper I- General Medicine including

1. Cardiovascular system,
2. Respiratory system
3. Renal system
4. Endocrinology
5. Symptomatology
6. Hemato-oncology
7. Fluid electrolyte balance.

Paper II- General Medicine

1. Central Nervous System
2. Gastroenterology
3. Rheumatology
4. Infectious diseases
5. Toxicology
6. Genetics
7. Psychiatry,
8. Dermatology and S.T.D

Theory paper Style (Marks 60, Time 3 Hrs)

SECTION - I

- Q 1 2X6= 12 marks (2 out of 3)
2 questions to be answered out of 3 which will be 6 marks of each
To be asked in both papers within specific systems
- Q 2 3X4= 12 marks (3 out of 4)
3 questions to be answered out of 4 which will be 4 marks of each
To be asked in both papers within specific systems
- Q 3 2X3= 6 marks (2 out of 3)
2 questions to be answered out of 3 which will be 3 marks of each

To be asked in both papers within specific systems

OR

- Q 3 1X6 = 6 marks (6 out of 6) Multiple choice questions (MCQ)
6 MCQ to be answered out of 6 which will 1 mark of each

SECTION – II

- Q 4 2X6=12 marks (2 out of 3)
2 questions to be answered out of 3 which will be 6 marks of each.
To be asked in both papers within specific systems
- Q 5 3X4= 12 marks (3 out of 4)
3 questions to be answered out of 4 which will be 4 marks of each.
To be asked in both papers within specific systems
- Q 6 1X6= 6 marks (6 out of 6) Short questions
6 short questions each of one mark to be asked from all systems from respective papers. -----OR-----
- Q 6 1X6 = 6 marks (6 out of 6) Multiple choice questions (MCQ)
6 MCQ each of one mark to be asked from all systems from respective paper

Qs no	No. of Qs	Mark	Total Marks	Questions to be asked from topic	
				Paper 1	Paper 2
SECTION - I					
1	2 out of 3	6	12	CVS, Renal, Hematology, endocrine	CNS, Rheumat, GI, Infectious
2	3 out of 4	6	12	RS, Water electrolyte, Renal	Skin, Psychiatry, infectious, toxicology
3	2 out of 3	3	06	CVS, Hematology, endocrinology	CNS, GI. Rheumat
Or					
3	6 out of 6	1	06	Paper – I all of above systems	Paper – II all of above systems
SECTION - II					
4	2 out of 3	6	12	Hematology, Endocrinology, Symptomtomatology	Genetics, GI, Toxicology
5	3 out of 4	4	12	Any one from above	Any one from above
6	6 out of 6	1	06	Paper – I all of above systems	Paper – II all of above systems
Or					
6	6 out of 6 (MCQ)	1	06	Paper 1 +2 all systems	Paper 1 +2 all systems
	Total		60		

University Practical Examination and Oral Viva

No	Heading	Marks	Time (Minutes)
1	Long Case (Including case Sheet writing)	1x40 = 40	45 minutes
2	Short Case 1	20X1=20	10 minutes
3	Short Case 2	20X1=20	10 minutes
4	Spotters	2x10=20	5 per spot
5	Table viva 1 includes ECG X ray Instruments,	10	10 per student
6	Table Viva 2 includes drugs, emergency	10	10 per student

Passing Criteria

No	Examination	Minimum Marks Required
1	Theory + Viva Table (120) + (20) = 140 Marks	50 % (70 Marks)
2	Practical (100 marks)	50 % (50 Marks)
3	Grand Total: Theory + Practical + Internal (Theory + Practical) (140) + (100) + (60) = 300 Marks	50 % (150 Marks) (with fulfilling criteria 1 & 2)

Pass :- A Candidate must obtain 50% in aggregate with a minimum of 50% in theory including oral viva table and minimum of 50 % in practicals/clinical.

**CURRICULUM
OF Subject**

**SURGERY AND ITS
ALLIED SPECIALITIES**

THIRD M.B.B.S.(PART- II)

Curriculum of Surgery & its allied specialties

Goal

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

Surgery Includes Orthopedics, Anesthesiology and Radio-Diagnosis & Dentistry as minor subjects

OBJECTIVES:

(A) KNOWLEDGE:

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

- 1) Describe Etiology, Patho-physiology, 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, disinfections 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 anesthetic agents, their indications, and mode of administration, contraindications and side effects.

(B) SKILLS:

At the end of the course, the student shall 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 result;
- 3) Identify and manage patients of hemorrhagic, septicemic and other types of shock;
- 4) Be able to maintain patent air-way & Assessment & management of resuscitation:
- 5) Identify and manage a critically injured patient;
- 6) Manage patient with cardio-respiratory failure.
- 7) Manage a drowning case
- 8) Monitor patients of head, chest, spinal and abdominal injuries, both adults and children;
- 9) Provide primary care for a patient of burns.
- 10) Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
- 11) Treat open wounds including preventive measures against tetanus and gas gangrene;
- 12) Diagnose neonatal and pediatric surgical emergencies and provide sound primary care before referring the patient to secondary/territory center.
- 13) Identify congenital anomalies and refer them for appropriate management.

In addition to the skills referred above in items (1) TO (13), he shall have observed/assisted/performed the following:

- a. Incision and drainage of abscess
 - b. Debridement and suturing open wounds
 - c. Venesection
 - d. Excision of simple cyst and tumours
 - e. Biopsy of surface malignancy
 - f. Catheterization and nasogastric intubation
 - g. Circumcision
 - h. Meatotomy
 - i. Vasectomy
 - j. Peritoneal and pleural aspirations
 - k. Diagnostic proctoscopy
 - l. Hydrocele operation
 - m. Endotracheal intubation
 - n. Tracheostomy and cricothyroidotomy;
 - o. Intercostal Drainage
- 14) Diagnose with reasonable accuracy all surgical illnesses including emergencies
- 15) (a) Resuscitate a critically injured patient and a severe burn patient
(b) Control surface bleeding and manage open wound.
- 16) (a) Monitor patients of head, spine, chest, abdominal and pelvic injury
(b) Institute first line management of acute abdomen.

(C) INTEGRATION:

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

(D) CURRICULUM:

Basic principles and practice of surgery covering curative aspect ; clinical presentations; investigations; diagnosis; differential diagnosis and comprehensive treatment, conservative as well as operative treatment and post operative care; rehabilitative and preventive aspects of common surgical conditions of all systems and organs of the human body; Applied anatomy; applied physiology; pathology and orthopedics; understanding the disease process; operations for population control and family planning. The subjects enumerated below will be covered in didactic lectures and in ward clinics.

I. GENERAL PRINCIPLES

IA.

1. Wound healing and management, scars ,Hypertrophic scar and keloid. First aid management of severely injured patient.
2. Asepsis, antisepsis , sterilization.
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, necrotizing fasciitis.
6. Tetanus and Gas gangrene with its Prevention and management.
7. Chronic specific infections; tuberculosis, Filariasis , and Leprosy.
8. Antibiotic therapy.
9. Hospital infection.
10. AIDS and Hepatitis B; Occupational hazards and prevention.

IB.

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 and electrolyte balance.
2. Shock; aetiology ; patho physiology and management.
3. Blood transfusion; indication and hazards.
4. Common postoperative complications

III. COMMON SKIN AND SUBCUTANEOUS CONDITIONS

1. Sebaceous cyst, dermoid cyst, lipoma, haemangioma, neurofibroma, premalignant conditions of the skin, basal cell carcinoma, squamous cell carcinoma , naevi and malignant melanoma.
2. Sinus and fistulae, pressure sores with its 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 Buerger's disease, atherosclerosis 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 Vein thrombosis; diagnosis and prevention, with 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; patho physiology; 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. ORAL CAVITY, JAWS, SALIVARY GLANDS.

1. Oral cavity ;
2. (1). Cleft lip and palate; Leukoplakia ; retention cyst; ulcers of the tongue.
(2). Clinical Features, diagnosis and basic principles of management of carcinoma lip, buccal mucosa and tongue, prevention and staging of oral carcinomas.
3. Salivary glands.
(1). Acute sialoadenitis , neoplasm with its diagnosis and principles of treatment.
(2). Epulis,cysts and tumors of jaw ; Maxillo - facial injuries ; salivary fistula.

X. NECK.

1. Branchial cyst ; cystic hygroma.
2. Cervical lymphadenitis; Non-specific and specific, tuberculosis of lymph nodes, secondaries in neck
3. Thoracic outlet syndrome; diagnosis and principles of management.

XI. THYROID GLAND.

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

XII. PARATHYROID AND ADRENAL GLANDS.

1. Clinical features and diagnosis of hyperparathyroidism, adrenal hyper function / hypo function.

XIII. BREAST.

1. Surgical anatomy; nipple discharge; acute mastitis, breast abscess, mammary dysplasia, gynacomastia , fibroadenomas.
2. Assessment and investigations of breast lump.
3. Cancer breast; diagnosis, staging, principles of management.

XIV. THORAX.

1. Recognition and treatment of pneumothorax , heaemothorax, pulmonary embolism with its Prevention, recognition and treatment;, flail chest , Stove in chest ; Postoperative pulmonary complications.

2. Principles of management of pyothorax ; cancer lung.

XV. HEART AND PERICARDIUM.

1. Cardiac tamponade
2. Scope of cardiac surgery.

XVI. OESOPHAGUS.

1. Dysphasia; causes; investigations and principles of management.
2. Cancer esophagus; Principles of management.
3. Esophageal varices & haemetemesis with its management.

XVII. STOMACH AND DUODENUM.

1. Anatomy; physiology, Congenital hypertrophic pyloric stenosis; aetiopathogenesis , diagnosis and management of peptic ulcer , cancer stomach; upper gastrointestinal hemorrhage with special reference of bleeding varices; duodenal ulcer with its complications and principles of management.

XVIII. LIVER.

1. Clinical features, diagnosis an principles of management of amoebic liver abscess , hydatid cyst and portal hypertension ; liver trauma.
2. Surgical anatomy; primary and secondary neoplasm of liver.

XIX. SPLEEN.

1. Splenomegaly; its 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.
2. Carcinoma of gall bladder, choledochal cyst

XXI. PANCREAS.

1. Acute pancreatitis; Clinical features, diagnosis, complications and management.
2. Chronic pancreatitis, pancreatic tumors.

XXII. PERITONEUM , OMENTUM , MESENTERY AND RETROPERITONEAL SPACE

1. Peritonitis; Causes, recognition and principles of management , intraperitoneal abscesses
2. Laparoscopy and laparoscopic surgery.

XXIII. SMALL AND LARGE INTESTINES.

1. Diagnosis and principles of treatment of; Intestinal amoebiasis, tuberculosis of intestine , carcinoma colon ; lower gastro-intestinal hemorrhage , enteric fever , parasitic infestations.
2. Ulcerative colitis, premalignant conditions of large bowel.

XXIV. INTESTINAL OBSTRUCTION.

1. Types, aetiology, diagnosis and principles of management.

XXV. ACUTE ABDOMEN.

1. Causes, approach , diagnosis and principles of management.

XXVI. APPENDIX.

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

XXVII. RECTUM.

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

XXVIII. ANAL CANAL.

1. Surgical anatomy, clinical features and principals management of fissure in ano , fistula in ano, perianal and ischiorectal abscess and hemorrhoids ; referral of anorectal anomalies.
2. Anal carcinoma.

XXIX. HERNIAS.

1. Clinical features, diagnosis, complications and principles of management of umbilical , inguinal , epigastric and femoral hernia, ventral hernia, incisional hernia.
2. Omphalitis.
3. Umbilical fistulae , burst abdomen

XXX. GENITO – URINARY SYSTEM.

1. Symptoms and investigations of the urinary tract.
2. Anuria; types ,causes, diagnosis & principals of management.

a. KIDNEY , URETER & BLADDER

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.
3. Bladder stones , bladder neoplasm , cystitis , diverticulum.

b. PROSTATE AND SEMINAL VESICLES

1. Benign prostatic hyperplasia; diagnosis and management.

c. URETHRA AND PENIS

1. Causes, Diagnosis and principles of management of Phimosi, paraphimosis and carcinoma penis; balanoposthitis.
2. Principles of management of urethral injuries.
3. Urethral strictures.

d. TESTES AND SCROTUM

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

XXXI 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 of bladder, 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, Exomphalos; Major/Minor
10. Wilm's Tumours; Neuroblastoma, Ganglioneuroma, Ganglioneuroma. Endo – Dermal Sinus Tumours.
11. Hamartomas in Children; Lymphangioma and Cystic hygroma, Haemangioma, Biliary Atresia and Surgical Jaundice

Surgery 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.
4. Somen Das; A Practical Guide to Operative Surgery, 4th Edition, 1999, S. Das, Calcutta.
5. SHORT CASES IN SURGERY – BHATTACHARYA
6. MANIPAL – MANUAL OF SURGERY
7. NAN – UNDERGRADUATE SURGERY
8. PARULEKAR – PRACTICAL SURGERY
9. PATEL – HANDBOOK OF SURGICAL INSTRUMENTS FOR UNDERGRADUATES
10. R.D.B'S – ART OF CLINICAL PRESENTATION IN SURGERY

11. R.D.B'S – ART OF STUDING SURGICAL PATHOLOGY

12. VAIDYA – CASSETTE CLINICAL IN GENERAL SURGERY (5-VOL SET)

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 ; Farqharson's Text Books of Operative Surgery , 8th Edition , 1995 , Churchill Livingstone.
5. Sir Charles Ilingworth , bruce m. Dick ; A text book of Surgical Pathology , 12th edition , 2979, Churchill Livingstone.
6. R.W.H.Macmann ; Last's Anatomy ; regional and applied ; 10th Edition , 1999 , Churchill Livingstone.

ORTHOPAEDCIS

(a) **KNOWLEDEGE:**

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 congenitalskeletal anomalies and their referral for appropriate correction or rehabilitation.
- (4) Recognize metabolic bone diseases as seen in this country;
- (5) Explain etiogenesis, manifestations, 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', 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.
- (5) Splinting (plaster slab) for the purpose of emergency splintage, definitive splintage and post operative splintage and application of Thomas splint;
- (6) Manual reduction of common fractures-phalangeal, metacarpal, metatarsal and Colles's fracture;
- (7) Manual reduction of common dislocations-interphalangeal, metacarpophalangeal, elbow and shoulder exdislocations;
- (8) Plaster cast application for undisplaced fractures of arm, forearm, leg and ankle;

- (9) Emergency care of a multiple injury patient;
- (10) Precautions about transport and bed care of spinal cord injury patients.
- (11) Advise about prognosis of poliomyelitis, cerebral palsy, CTEV and CDH;
- (12) Advise about rehabilitation of amputees and mutilating traumatic and leprosy deformities of hand;
- (13) Drainage for acute osteomyelitis;
- (14) Sequestrectomy in chronic osteomyelitis;
- (15) Application of external fixation;
- (16) Internal fixation of fractures of long bones.

(c) **APPLICATION:**

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

(d) **INTEGRATION:**

Integration with Anatomy; Surgery; Pathology; Radiology and Forensic Medicine is done.

(e) **CURRICULUM:**

The clinical term would be for a period of six weeks. Before the students are placed in the orthopaedic term, he would have done at least one surgical and one medical term.

About 30 lectures should be allocated for the graduates in this subject. The lectures should be divided approximately half each. i.e. 15 each for trauma and for cold (non-trauma) orthopaedics.

i. Didactic Lectures – Trauma:

- (1) Introduction including definition of various terms; scope of subject; brief history; classification of conditions and introduction to latest developments.
- (2) Bone and joint injuries- fractures; dislocation and sprains, definitions; terminology; epiphyseal injuries; healing of fractures.
- (3) Principles of management of severe trauma-aims of management and life saving measures; limb saving measures.
- (4) Treatment of fractures-principles; aims of treatment; operative management and rehabilitation and prevention of joint stiffness; compound fractures (open fractures); principles of management.
- (5) Complications of fractures – (a) injury to blood vessels (b) injury to nerves (c) delayed union, nonunion (d) myositis ossificans (e) avascular necrosis (f) Budeck's atrophy (g) fat embolism.
- (6) Joint injuries and soft tissue injuries – sprains; ruptures of ligaments and dislocation; traumatic synovitis; tendon ruptures and haemarthrosis.
- (7) Fractures of upper limb-supracondylar fractures of humerus. Colles' fracture.
- (8) Fractures of lowr limb-fractures of femoral neck; fractures of ankle joint and ligament injuries.
- (9) Injuries of the spine-cervical spine, Dorsal and lumbar spine; paraplegia.
- (10) Injuries of the knee joint – ligament injuries, meniscus injuries and internal derangement.
- (11) Peripheral nerve injuries-anatomy; effects; nerve degeneration and regeneration; classification and management.
- (12) Fracture-calvicle, forearm bones, femur, tibia, fibula.

- (13) Dislocation-shoulder, elbow and hip; habitual and recurrent dislocation of shoulder and patella.
- (14) Specific nerve injuries – brachial plexus; radial nerve, ulnar nerve, median nerve, plexus nerve, sciatic nerve, thoracic outlet syndrome.

ii. Didactic lectures –non-trauma.

- (1) Osteomyelitis – acute, chronic and pyoarthrosis.
- (2) Osteoarticular tuberculosis –introduction: Pathology; principles of management.
- (3) Tuberculosis joint and knee joint: tuberculosis of spine and Pott's paraplegia.
- (4) Arthritis-types and classification; rheumatoid arthritis-pathology;diagnosis and treatment.
- (5) Osteoarthritis-pathology;diagnosis and management-osteoarthritis of hip and knee.
- (6) Rickets-osteomalacia; hyperparathyroidism; genu vara; genu valga;
- (7) Poliomyelitis-cerebral palsy and spina bifida.
- (8) spondylosis-lumbar and prolapsed intervertebral disc, lumbar spinal canal stenosis and spondylolisthesis.
- (9) Cervical spondylosis.
- (10) Perthe's disease and epiphysitis-slipped upper-femoral epiphysis, congenital subluxation and dislocation of hip.
- (11) Congenital-club foot, flat foot.
- (12) Bone tumours- classification, general principles of management and secondary deposits in bones; amputation.
- (13) Tuberculosis-compound palmar ganglion.
- (14) Still's disease; other conditions related to rheumaroid arthritis.
- (15) neuropathic joint shoulder hand syndrome;tennis elbow; Carple Tunnel syndrome. Trigger finger.
- (16) Scoliosis.
- (17) Flat foot-painful planter fascitis; calcaneal spur; calcification at tendoachilles insertion.

iii. Tutorials:

- (1) Traction-Splints (Bohler and Thomas): application; Splints; Arthrodesis etc.
- (2) Plaster of paris-plaster cast application, general principles.
- (3) Surgical instruments- pertaining to bone surgery & general set only (no specialized instruments).
- (4) Common fractures and demonstration of common clinical problems.
- (5) Covering important and common topics from the ones listed in clinical term.

ANESTHESIOLOGY:

(i) GOAL:

The broad goal of the teaching of undergraduate students in Anesthesiology is to provide and understanding of the natural history of anesthesia & its need for successful outcome of surgical procedure. To know the varies types of anesthesia , its pre requisite investigations safe dose & drugs in particular disease , immediate post anesthetic case etc.

(ii) **OBJECTIVES:**

- (1) Perform pre-anesthetic check up and prescribe pre-anesthetic medications;
- (2) Perform venepuncture and set up intravenous drip;
- (3) Perform laryngoscopy and endotracheal intubation;
- (4) Perform lumbar puncture, spinal anesthesia and simple nerve blocks;
- (5) Conduct simple general anesthetic procedures under supervision;
- (6) Monitor patients during anesthesia and post-operative period;
- (7) Recognize and manage problems associated with emergency anesthesia;
- (8) Maintain anesthetic records;
- (9) Recognize and treat complication in post operative period;
- (10) Perform cardio-pulmonary brain resuscitation (C.P.B.R.) correctly, including recognition of cardiac arrest.

RADIO-DIAGNOSIS and RADIOTHERAPY:

(A) **RADIO-DIAGNOSIS AND IMAGING:**

(i) **GOAL:**

The broad goal of teaching the undergraduate medical student in the field of Radio-diagnosis should be aimed at making the students realize the basic need of various radio-diagnosis tools in medical practice. They shall be aware of the techniques required to be undertaken in different situations for the diagnosis of various ailments as well as during prognostic estimations.

(ii) **OBJECTIVES:**

(a) **KNOWLEDGE:**

The student shall be able to:

- 1) Understand basic of x-ray production its uses and hazards.
- 2) Appreciation and diagnosis of various radiological changes in disease conditions of chest and mediastinum, skeletal system, Gastro Intestinal Tract, hepatobiliary system and Genito Urinary (G.U.) system;
- 3) Learn about various imaging techniques, including isotopes, Computerized Tomography (C.T.). Ultrasound (USG) system , M R I (Magnetic Resonance Image)

(c) **SKILLS:**

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

- (1) Use basic protective techniques during various imaging (M.R.I.) and D.S.A.
- (2) Interpret common x-ray & radio-diagnostic techniques in various community situations.
- (3) Advise appropriate diagnostic procedures in specialized circumstances by appropriate specialists.
- (4) Handle all aspects of 'Emergency Room' Radiology like:
 - a. All acute abdominal conditions
 - b. All acute traumatic conditions with emphasis on head injuries
 - c. Differentiation between medical & surgical radiological emergencies
- (5) Basic hazards and precautions in Radiodiagnostic practices

RADIOLOGY-CURRICULUM:

Teaching during the undergraduate term in the department of radiology usually comprises of two weeks and includes lectures in class-rooms; teaching in wards during the clinical terms along with clinical subjects will be by the teachers concerned on investigational procedures. The students are also given elementary knowledge of medicine and its value in diagnosis and therapy.

- (1) X-rays-production; uses and properties of x-rays' , dangers of radiation and the measures to be adopted for protection of patients and the medical personnel.
- (2) General Knowledge-use of X-ray machine in the department; X-ray films in use in different imaging modalities and dark room techniques.
- (3) CAT scan-physics; its role as an imaging modality.
- (4) Ultrasound-physics; its properties and uses.
- (5) Magnetic resonance imaging-physics and its uses.
- (6) Specialized procedures-practical training in Barium meal; Barium enema; IVP, myelography; arteriography etc.
- (7) Normal radiological anatomy-including cross sectional anatomy.
- (8) Radiological appearances-of common pathology during reporting session.

Didactic lecture-Following topics shall be covered in class rooms.

- (1) Bones and joints-bone infections; vascular necrosis, bone tumours, skeletal disorders of metabolic and endocrinal origin.
- (2) Inflammatory diseases of lungs. Tumours of lungs & mediastinum.
- (3) Cardiovascular system – congenital heart disease, acquired heart diseases; diseases of pericardium.
- (4) G.I. Tract and abdomen-Barium meal, barium enema, acute abdomen.
- (5) Hepatobiliary system- diseases of liver, diseases of gall bladder, and pancreas, special emphasis on the role of ultrasound and CT in these diseases.
- (6) Urogenital system- renal calculi, renal infection, renal tumours, lower urinary tract obstruction, diseases of urinary bladder and prostate, diseases of uterus and adnexa.
- (7) Ear, nose and throat-pharynx and larynx, paranasal sinuses, mastoid.
- (8) Central nervous system – abnormal skull, inflammatory diseases of spine, myelography and spinal cord tumours; the role of newer imaging modalities e.g. CAT scan and MRI.
- (9) Obstetrics and gynaecological diseases – study of normal foetal development by Ultra Sound, early diagnosis of foetal anomalies and growth retardation, pelvimetry; hystero-salpingo-raphy, ultra sound in gynaecological disorders.

RADIOTHERAPY

(i) GOAL:

The broad goal of teaching the undergraduate medical students in the field of Radiotherapy is to make the students understand the magnitude of the ever-increasing cancer problem in the country. The students must be made aware about steps required for the prevention and possible cure of this dreaded condition.

(ii) **OBJECTIVES:**

(a) **KNOWLEDGE:**

- (1) Identify symptoms and signs of various cancers and their steps of investigations and management.
- (2) Explain the effect of radiation therapy on human beings and the basic principles involved in it.
- (3) Know about radio-active isotopes and their physical properties.
- (4) Be aware of the advance made in radiotherapy in cancer management and knowledge of various radio therapeutic equipment while treating a patient.

(b) **SKILLS:**

At the completion of the training programmed & Examination, the student shall be able to:

- (1) Take a detailed clinical history of the case suspected of having a malignant diseases & possible use of radiotherapy to cure it.
- (2) Assist various specialists in administration of anticancer drugs; use of various radio therapeutic equipment, while treating a patient of cancer.

SURGERY DEPARTMENT

Surgical Unit Management

Total Unit – V

	OPD	WARD	OT
UNIT - I	Monday	Tuesday	Wednesday
UNIT- II	Tuesday	Wednesday	Thursday
UNIT- III	Wednesday	Thursday	Friday
UNIT - I	Thursday	Friday	Saturday
UNIT - IV	Friday	Saturday	Monday
UNIT - V	Saturday	Monday	Tuesday

Note: - Sunday emergency will be done by Rotation.

Clinical Posting 5 :- Total 26 Weeks in General Surgery

Clinical Posting	Weeks	Semester
1 st	6	3 rd Semester II/I MBBS
2 nd	4	5 th Semester II/III MBBS
3 rd	4	7 th Semester III/I MBBS
4 th	6	8 th Semester III/II MBBS
5 th	6	9 th Semester III/II MBBS

Clinical Posting Schedule of Batches:

(Batch is known by year of Admission at 1st MBBS e.g. August 2012 major or minor)

Total students: divided into 3 Batches – A, B, C,

Division of Batches (A, B, C,) subdivided into

A-1, A-2

B-1, B-2

C-1, C-2

Rotation:

Posting Detail Unit Wise (Rotated every six months)

Clinical Posting	Batch (A-1,B-1,C-1)	Batch (A-2,B-2,C-2)
First Posting	Unit – 1	Unit – 2
Second Posting	Unit – 3	Unit – 4
Third Posting	Unit – 5	Unit – 1
Forth Posting	Unit – 2	Unit – 3
Fifth Posting	Unit – 4	Unit – 5

Surgery Clinical Posting Syllabus

1st Posting (6 Weeks) – 3RD Semester

- a) Introduction & visit of OPD , Surgical Department , Surgical Wards , Surgical OT , Surgical ICU , CSSD & Casualty & Dialysis center & Board Room, central of supply.
- b) History taking of a Surgical Patient in detail.
- c) OPD attendance and approach to patient according to history taking & communication methods.
- d) History taking of surgical patient by students.
- e) History review by Teachers.
- f) Antiseptic solution & aseptic precautions.
- g) Instruments used for dressings only.
- h) Definition concern to swelling & Ulcer.
- i) Subcutaneous Swellings like - Lipoma, Neurofibroma, Sebaceous Cyst, Dermoid Cyst, Ganglion , Abscess , Hemangioma , Lymphangioma , gynaecomastia etc
- j) Ulcer as a whole & wounds
- k) Clinical case presentation of ulcer & Swelling
- l) Ward Ending Exam.

2nd Posting (4 Weeks) – 5th Semester

- a) History taking revision.
- b) Suture materials
- c) Hernia & Groin Swelling - Indirect Inguinal Hernia, Direct inguinal hernia , Femoral hernia, Epigastrie hernia , Incision hernia , Umbilical hernia .. etc

- d) Hydrocele & other scrotal swelling
- e) Bed side teaching.
- f) Clinical case presentation of hernia & hydrocele.
- g) Ward ending Exam

3rd Posting (6 Weeks) – 7th Semester

- a) History taking revision
- b) Thyroid Swelling
- c) Salivary gland Swellings
- d) Neck Swelling Like ; Sublingual swelling, Cystic hygroma, Thyroglossal cyst, Lymphnode swelling, Branchial cyst, Carotid artery aneurysm , Carotid body tumor, Ranula , Cold abscess etc
- e) Undescended testis
- f) Bed side teaching
- g) Clinical case presentations.
- h) I V Fluids
- i) Instruments
- j) Ward procedures like, Ryle's tube, ICD, Catheters, I V Canula etc.
- k) Ulcer & Swelling revision
- l) Ward Ending Exam

4th Posting (6 Weeks) – 8th Semester

- a) Peripheral vascular (Arterial) disease & Amputation stump
- b) Varicose veins
- c) Lymphatics
- d) Breast Lesions – Benign & Malignant with Breast reconstruction
- e) Penile lesions
- f) Bed side teaching.
- g) Clinical case presentations.
- h) Burns & Skin Grafting
- i) X-ray & Surgical Organ Specimens
- j) Thyroid , Parotid , neck swelling revision.
- k) Ward Ending Exam

5th Posting (4 Weeks) – 9th Semester

- a) Abdominal Lump Including –
 - Hepatomegaly
 - Splenomegaly
 - Renal lump
 - Ovarian Cyst
 - RIF Lump , etc
 - Aortic aneurysm
- b) Surgical Jaundice
- c) Soft tissue sarcoma
- d) Diabetic foot
- e) Abdominal (Gastro intestinal) Stoma eg. Colostomy / ileostomy

- f) Bed side teaching
- g) Clinical case Presentation
- h) Long cases & short cases introduction
- i) Revision
- j) Ward Ending Exam

A. Syllabus for Illrd MBBS: Theory – General Surgery

A1. First Internal examination: One Theory Paper – 3 Hours Duration- Total 60 Marks (To be conducted in the beginning of 8th Semester)

- 1. Wounds ,tissue repair, scar, wound infections
- 2. Critical care, fluid, electrolyte and acid base balance, blood transfusion, Shock
- 3. Nutritional support and rehabilitation
- 4. AIDS , special infections
- 5. Special precaution
- 6. Tumors, cysts, ulcers , sinus
- 7. Transplantation
- 8. Plastic and reconstructive surgery and skin lesions
- 9. Burns
- 10. Arterial , venous and lymphatic disorders
- 11. Accidents , warfare and emergency and trauma
- 12. Hand and foot , nerves
- 13. Radiology : diagnostic
- 14. Anesthesia and resuscitation

A2. Second internal examination : One Theory Paper – 3 Hours Duration – Total 60 Marks (To be conducted in the beginning of 9th semester)

- 1. Thorax
- 2. Endocrine - Thyroid ,Parathyroids ,adrenals
- 3. Breast
- 4. Gastro Intestinal tract
- 5. Genitourinary system
- 6. Hernias
- 7. Abdominal wall
- 8. Umbilicus
- 9. Pediatric surgery
- 10. Day care surgery
- 11. Surgical Audit
- 12. Newer technologies in surgery

A3. Syllabus distribution For Preliminary & University Examination.

Theory

Paper I:

Section I:

1. General surgery
2. Head and neck except thyroid
3. Thorax

Section II:

1. Orthopedics only

Paper –II:

Section I:

1. Gastrointestinal tract
2. Endocrine - thyroid, parathyroids, adrenals
3. Breast
4. Pediatric surgery
5. Hernia, umbilicus, abdominal wall

Section II:

1. Genito-urinary system
2. Recent advances
3. Anesthesia
4. Hand and foot
5. Radiology & radiotherapy
6. Dentistry
7. Miscellaneous

B. Structure of Paper:

B1. For Internal examination: Each exam will have one paper: Time Duration 3 hours - 60 Marks

1. Two Internal Theory Examinations
2. One paper for each Examination
3. 1st internal examination conducted at the Beginning of 8th Semester
4. 2nd internal examination conducted at the Beginning of 9th Semester

B2. For preliminary exam : 2 Papers: each papers will have 3hours time & 60 marks.

1. Two papers – paper - I & paper - II ,
2. Each paper have two sections – I & II
3. Paper I / section - II – Orthopedics only
4. Paper pattern is the same as university exam.

B3. Theory Paper pattern for Preliminary & University Exam

Q No.	Section –I		Marks
1	Write Notes	2 of 3	2 X 6 = 12
2	Write short notes	3 of 4	3 X 4 = 12
3	Write short notes OR Multiple choice question (MCQ)	2 of 3 Or 6 of 6	2 X 3 = 6 Or 6 X 1=6
Section –II			
4	Write Notes	2 of 3	2 X 6 = 12
5	Write short notes	3 of 4	3 X 4 = 12
6	Write in 2–3 sentences OR Multiple choice question (MCQ)	6 of 6 Or 6 of 6	6 X 1 = 6 Or 6 X 1=6

C. Internal Assessment Pattern :

Ward ending exam at end of each posting.

Case 20 marks Table 10 marks

Total 30 marks of each clinical posting

Total 5 Posting - Total 150 Marks

Theory examination:-

1st Internal – 60 marks

2nd Internal - 60 marks

Best one of two will be considered for internal assessment for Theory Internal Marks

– Total 60 Marks

D. Preliminary Exam & University Theory & Practical examination Exam Pattern

Theory	
Paper – 1	60 Marks
Paper – 2	60 Marks
Practical	
Long Case (40 Marks) + Table - 1 (10 Marks) (Gen.Surgery)	50 Marks
Short Case (Gen.Surgery)	25 Marks
Ortho Case	25 Marks
Table Viva-2 (Gen.Surgery)	20 Marks

➤ Table viva-2 marks will be added in the theory marks.

➤ Internal assessment for surgery will include Dental, Casualty, Radiology, Anesthesia and Orthopedics posting.

E. Internal Marks Calculation

		Marks	
		Practical	Theory
I.	Internal Exam		
	(1). Surgery	05 (1 marks for each clinical posting as per ward ending exam)	05 (Internal Theory exam 1 & 2) Best one of the two
	(2). Orthopedic	03	03
	(3). Anesthesia	02	03
	(4). Radiology	03	02
	(5). Dentistry	02	02
	Total	15	15
II.	Preliminary Exam	10	10
III.	Attendance	05 (attendance of 5 clinical posting)	05 (attendance for theory lectures)
	Grand total (I+II+III)	30 Marks	30 Marks

F. Eligibility Criteria to Appear in University Exam

		Eligible Criteria
1	Presence/Attendance	Minimum 75 % of combined Clinical postings + Theory lectures
2	Internal Marks	Minimum 35 % Marks combined Practical exam + Internal theory exam
3	Passing in Illrd Professional (Part I) is Compulsory for being eligible for Illrd Professional (Part - II) Examination.	

G. Passing Criteria

No	Examination	Minimum Marks Required
1	Theory + Viva Table (120) + (20) = 140 Marks	50 % (70 Marks)
2	Practical (100 marks)	50 % (50 Marks)
3	Grand Total: Theory + Practical + Internal (Theory + Practical) (140) + (100) + (60) = 300 Marks	50 % (150 Marks) (with fulfilling criteria 1 & 2)

Pass :- A Candidate must obtain 50% in aggregate with a minimum of 50% in theory including oral viva table and minimum of 50 % in practicals/clinicals.

Department of Surgery – Clinical Posting record

Posting	Duration	Dates		% Attendance	Assessment/ Ward ending
		From	To		
Ist	6 Week				
	Remarks Signature of Unit Head				
IInd	4 Week				
	Remarks Signature of Unit Head				
IIRD	6 Week				
	Remarks Signature of Unit Head				
IVth	6 Week				
	Remarks Signature of Unit Head				
Vth	4 Week				
	Remarks Signature of Unit Head				

FINAL REMARKS:

Completion Certificate

This is to certify that

.....has completed the academic schedule of Surgery Department Satisfactorily/Unsatisfactorily.

Date:

Head of Department
Department Surgery

**CURRICULUM
OF SUBJECT**

**OBSTETRICS
AND
GYNAECOLOGY**

THIRD M.B.B.S.(PART- II)

CURRICULUM OF OBSTETRICS AND GYNAECOLOGY

Obstetrics and Gynaecology to include family welfare and family planning.

i) GOAL:

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

ii) OBJECTIVES:

a. KNOWLEDGE :

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

1. Outline the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it.
2. Detect normal pregnancy, labour, puerperium and manage the problems he/she is likely to encounter therein.
3. List the leading causes of maternal and perinatal morbidity and mortality.
4. Understand the principles of contraception and various techniques employed methods of medical termination of pregnancy, sterilization and their complications.
5. Identify the use, abuse and side effects of drugs in pregnancy, premenopausal and post-menopausal periods.
6. Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
7. Identify common gynaecological diseases and describe principles of their Management.
8. State the indications, techniques and complications of surgeries like Caesarian section, laparotomy, abdominal and vaginal hysterectomy, Fothergill's operation and vacuum aspiration for M.T.P.

b. SKILLS :

At the end of the course, the student should 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 congenital anomalies.
4. Advise a couple on the use of various available contraceptive devices and assist in insertion in 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 vagina 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 should be able to integrate clinical skills with other disciplines and bring about coordinations of family welfare programmes 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 (ii) the management of the puerperium and (iii) a minimum period of 5 months in-patient and out-patient training including family 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 in 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, should be signed by a responsible medical officer on the staff of the hospital and should 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 should 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.

5. FAMILY PLANNING:

Training in Family Planning should be emphasized in all the three phases.

CLINICAL POSTING:

Semester	Weeks (TOTAL 24)
3	2
4	4
5	4
7	4
8	4
9	6

Examination and Marks:

Internal Examination: 1st internal will be conducted in the beginning of 8th semester. 2nd internal will be conducted in the beginning of 9th semester.

No.	Name of Examination	Semester	Total Theory Marks (Paper 1 & 2, Each of 40 marks)	Internal Assessment Marks Theory (20 marks)	Total practical marks	Internal Assessment Marks Practical (20 marks)
1	1 st internal	8 th	80	05(Best one of two will be considered)	80	05(Best one of two will be considered)
2	2 nd internal	9 th	80		80	
3	Prelims	9 th	80	10	80	10
4	Attendance			05		05

University Examinations

Questions requiring essay type answers may be avoided.

Theory =Two papers of 40 marks each 80 marks

Paper I - Obstetrics including social obstetrics.
(Shall contain one question on basic sciences and allied subjects)

Paper II - Gynaecology, Family Welfare and Demography
(Shall contain one question on basic sciences and allied subjects)

Oral (Viva) including record of delivery cases (20+10) 30 marks

Clinical/Practical Examination 50 marks

Internal assessment
(Theory-20, Practical-20) 40 marks

Total 200marks

Serial No.	Name of Examination	Paper 1 marks	Paper 2 marks	Oral (Viva) including record of delivery cases	Total marks	Internal assessment marks
1	Theory	40	40	30	110	20
2	Practical /Clinical				50	20

Grand total = 200 Marks

Structure of examination

Theory examination Two papers of 40 marks each (**total 80 marks**).

Paper I - Obstetrics including social obstetrics.

(Shall contain one question on basic sciences and allied subjects)

Date:

Time: 2 hours

Total Marks: 40

Please Note:

1. Attempt all questions.
2. Write legibly and to the point.
3. Unattempted questions will not be marked.
4. No marks will be given to irrelevant answer.

Q. no.	Type of question	Option	Marks
1	Write Notes	1 out of 2	01×10=10
2	Write Short Notes	2 out of 3	02×05 =10
3	Write Short Answers	No option	10×02=20

Paper II - Gynaecology, Family Welfare and Demography.

(Shall contain one question on basic sciences and allied subjects)

Date:

Time: 2 hours

Total Marks: 40

Please Note:

1. Attempt all questions.
2. Write legibly and to the point.
3. Unattempted questions will not be marked.
4. No marks will be given to irrelevant answer.

Q. no.	Type of question	Option	Marks
1	Write Notes	1 out of 2	01×10=10
2	Write Short Notes	2 out of 3	02×05 =10
3	Write Short Answers	No option	10×02=20

Practical/Clinical Examination+ Oral (Viva) including record of delivery cases (Total 80 marks)

Oral (Viva) including record of delivery cases (20+10) 30 marks
(Obstetric long case)

Gynec table 30 marks

Obstetric table 20 marks

SEMESTER WISE SKILLS TO BE TAUGHT DURING DIFFERENT CLINICAL POSTINGS

SKILLS TO BE TAUGHT DURING DIFFERENT CLINICAL POSTINGS:

Semester: 3rd & 4th (First & Second Clinical Posting)

- ❖ **Duration** : 2+4 weeks
- ❖ **Time & Place available:**
 - OPD days : 4
 - Indoor days: 12
 - Operation Days : 8 (4 days in GOT, 4 days in MTP OT)
- ❖ **Skills:**
 - Introductory Course (2 weeks)
 - What is Obstetrics &Gynaecology?
 - Safe Motherhood (Maternal Mortality & Morbidity)
 - Perinatal Mortality
 - Antenatal Care
 - Female pelvis, presentation, position, lie & attitude
 - History taking in Obstetrics &Gynaecology
 - Methods of examination in Gynaecology P/V & P/S examination
 - Contraception in general
 - Family Planning counselling
 - What is MTP?
 - Normal Labor
 - Normal Puerperium
- ❖ **Skills: (clinical) (2 Weeks)**
 - Examination of pregnant woman
 - Conduction of normal delivery
 - Provision of postnatal care
 - Demonstration of per P/S & P/V examination
(Examination of gynec patient)

Semester: 5th(Third Clinical Posting)

- ❖ **Duration** : 4 weeks
- ❖ **Time & Place available:**
 - OPD days : 4
 - Indoor days: 12
 - Operation Days : 8 (4 days in GOT, 4 days in MTP OT)
- ❖ **Skills:**
 - All skills of first clinical posting
 - Abortion (Diagnosis)
 - Per vaginal examination in gynec patients (Demonstration)
 - Conduction of normal delivery (to witness 3 cases)
 - Early detection of genital malignancy

- Family planning counselling demonstration Family planning counselling (General) (To Practise)
- Identification of common gynec problems
- Interpretation of biochemical, histopathological, radiological & USG data.
- Scrubbing prior to surgery
- Breast feeding promotion

Semester: 7th (Fourth Clinical Posting)

❖ **Duration :4 weeks**

❖ **Time & Place available:**

- OPD days : 4
- Indoor days: 12
- Operation Days : 8 (4 days in GOT, 4 days in MTP OT)

❖ **Skills:**

- All skills of first & second clinical posting
- Abortion diagnosis & management
- Demonstration of smear preparation for
 - Trichomonias vaginalis
 - Moniliasis
 - Gonococci
 - Pap smear
- Diagnosis of high risk pregnancy
 - Anaemia, Pre-eclampsia & appropriate referral
- Conduction of normal delivery (to witness 5 cases) & follow up
- Diagnosis of complication of labor
 - Prolong latent phase
 - Prolong active phase
 - Premature rupture of membrane
 - Uterine inertia
 - Foetal distress
- Resuscitation of new born
- Family planning
 - Counselling (Method specific for IUD)
 - Insertion & removal of IUD
- Vaginal & per speculum examination of gynec patient (To practice)
- Smear preparation including Pap's smear (To practice)
- Interpretation of data (Normal & Abnormal)
 - Biochemical
 - Histopathological
 - Radiological
 - USG

Assisting during D& C, D & E, MTP

Selection of client for MTP first trimester, TL

Diagnosis of common gynec problem like Uterine Prolapse, Leucorrhoea, Cervical conditions, Breast feeding counselling & promotion.

Semester: 8th (Fifth Clinical Posting)

❖ **Duration** : 4 weeks

❖ **Time & Place available:**

- OPD days : 4
- Indoor days: 12
- Operation Days : 8 (4 days in GOT, 4 days in MTP OT)

❖ **Skills:**

- All skills of 2nd& 3rd clinical posting
- Conduction of normal delivery (To assist 10 cases) including Episiotomy
- Diagnosis of High Risk Pregnancy
 - Antepartum Haemorrhage
 - Abnormal presentation Occipito-posterior, Breech
 - Eclampsia & appropriate referral
 - Contracted pelvis
 - Previous LSCS
 - Multiple pregnancy
- Diagnosis of complication of labor
 - Cord prolapse
 - Hand prolapse
 - Retained placenta
 - Post-partum Haemorrhage (Atonic & Traumatic)
- Resuscitation of new born
- Reorganisation of congenital anomalies in new born
- Per speculum & per vaginal examination in gynec patient (To practice)
- Post coital test (Demonstration)
- Family planning
 - Counselling (Method specific for Oral Pills & Barrier methods)
- Interpretation of data (Normal & Abnormal)
 - Biochemical
 - Histopathological
 - Radiological
 - USG
- Assisting during Abdominal Tubal Ligation
- Observation of LSCS, Forceps, Vaccum
- Provision of Emergency Obstetric Care for
 - Eclampsia
 - CCF following severe anaemia
 - Haemorrhagic Shock
 - Puerperial Shock
 - Post Abortal Sepsis

- ❖ **Semester: 9th (Sixth Clinical Posting)**
- ❖ **Duration** : 6 weeks
- ❖ **Time & Place available:**
 - OPD days : 6
 - Indoor days: 18
 - Operation Days : 12 (6 days in GOT, 6 days in MTP OT)
- ❖ **Skills:**
 - Recognition of High Risk Pregnancy
 - Abnormal presentation (Transverse lie, Face)
 - IUGR
 - Appropriate referral
 - Recognition of complication of labor
 - Rupture of uterus
 - Post-partum haemorrhage
 - Inversion of uterus
 - Obstetric Shock
 - Appropriate referral
 - Family planning counselling (Follow up counselling)
 - Observation of Abdominal Hysterectomy, Vaginal Hysterectomy, Laparoscopy.
 - Emergency Obstetrics care of PPH
 - Uterine massage
 - Cervical tear suturing
 - Uterine packing

THEORY LECTURE PROGRAMME

II/I 3 rd Semester	1. Anatomy of Genital Organs 2. Congenital Abnormalities of Female Genital Organs and its importance 3. Physiology of Menstruation 4. Physiology of Conception 5. Physiological Changes during pregnancy 6. Physiological Changes during pregnancy (Conti.) 7. Diagnosis of Pregnancy - First Trimester 8. Diagnosis of Pregnancy - Second Trimester 9. Diagnosis of Pregnancy - Third Trimester 10. Antenatal Care
II/II 4 th Semester	1. Abortion 2. Abortion (Cont.) 3. Vesicular Mole 4. Ectopic Pregnancy 5. Contraception – principle, types, key features of each 6. Normal Labour – Anatomy & Physiology 7. Normal Labour- Mechanism 1 st & 2 nd Stage

	<ol style="list-style-type: none"> 8. Normal Labour - Management 1st& 2nd Stage (Including Partogram) 9. Normal Labour - Mechanism& Management of 3rd Stage 10. Normal Puerperium including Breast Feeding 11. Family planning counselling 12. Contraceptive Methods : Barrier Methods 13. Contraceptive Methods : Oral Contraceptive Pills 14. Contraceptive Methods : Intrauterine Contraceptive Devices 15. Maternal Mortality & Morbidity (General) , Perinatal Mortality & Mortality (General) 16. Prescribing during Pregnancy 17. Medical termination of pregnancy Act 18. Toxaemia of Pregnancy 19. Toxaemia of Pregnancy (Cont.) 20. Anaemia during Pregnancy (Cont.) 21. Anaemia during Pregnancy (Cont.)
III / I 6 th Semester	<ol style="list-style-type: none"> 1. Antepartum Haemorrhage 2. Antepartum Haemorrhage (Cont.) 3. Pregnancy & Cardiac Disease 4. Pregnancy & Diabetes Mellitus 5. Pregnancy & infections (Malaria, Tuberculosis, Hepatitis) 6. Hydroamnios & Oligohydroamnios 7. Preterm Labour 8. Post term Pregnancy 9. Induction of Labour 10. Ultrasonography in Obstetrics& Gynaecology (General) 11. Multiple Pregnancy 12. Occipito Posterior Position 13. Breech Presentation 14. Transverse Lie 15. Face, Brow, Cord & Compound Presentation 16. Version 17. Contracted Pelvis 18. Obstructed Labour, Rupture uterus 19. Post-Partum Haemorrhage 20. Puerperial sepsis
III/II 7 th semester	<ol style="list-style-type: none"> 1. Contraception – Surgical Methods for Female & Male 2. Newer Contraceptive Technology 3. Infertility 4. Infertility (Cont.) 5. Infertility (Cont.)

	6. HIV in pregnancy & universal precaution 7. PCOD 8. Menstrual Disorders – Amenorrhoea ,Primary & Secondary 9. Abnormal uterine bleeding 10. Menopause 11. Disorder of puberty 12. Premalignant lesion (Cervix & Endometrium) Urinary problem in gynecology
III/III 8 th semester	1. Vaginal Infection & STD 2. Pelvic inflammatory disease 3. Fibroid 4. Endometriosis 5. Adenomyosis 6. Retroversion of Uterus 7. Prolapse of Female Genital Tract 8. Prolapse of Female Genital Tract (Cont.) 9. Fistulae (VVF & RVF) 10. Fistulae (VVF & RVF) 11. Screening procedure in gynec 12. Cancer of Cervix 13. Cancer of Body of Uterus 14. Ovarian Tumors 15. Chorocarcinoma
III/IV 9 th semester	1. Common operative videos (Abdominal Hysterectomy , Vaginal Hysterectomy , Forceps Delivery , Caesarean Section) 2. Overview of Laparoscopy and Hystereoscopy 3. Imaging in obstetric and gynecology 4. Special topics 5. University Paper discussion 6. National Programme for Maternal Health 7. Multiple choice question 1 8. Multiple choice question 2 9. Multiple choice question 3 a. REVISION

**CURRICULUM
OF SUBJECT**

PAEDIATRICS

THIRD M.B.B.S.(PART- II)

PAEDIATRICS: Paediatrics 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, scope of Social Paediatrics and counselling.

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 should 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, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation.
- (3) state 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 immunisation programmes.

b. SKILLS

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

- (1) 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.
- (2) take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programs, perform venesection, start an intravenous saline and provide nasogastric feeding.
- (3) conduct diagnostic procedures such as lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascitic tap.
- (4) distinguish between normal newborn babies and those requiring special care and institute early care to all new born babies including care of preterm

and low birth weight babies, provide correct guidance and counselling in breast feeding.

(5). 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 a team in an integrated form with other disciplines, e.g. Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Pharmacology, Forensic Medicine, Community Medicine and Physical Medicine and Rehabilitation.

PERIOD OF TRAINING:

Learning Objective

· ***Cognitive:*** Normal child, growth, development, feeding, immunization, normal new born.

· ***Specific Learning Objective (Skills)***

1. Take a detailed Paediatric history.
2. Understand normal growth and development.
3. Conduct physical examination of children.
4. Perform anthropometry and interpret growth.
5. Developmental assessment of a child.
6. Medical conduct (Ethics) during patient examination.
7. Diagnosis of paediatric disorders and management of common diseases in neonates and children

Theory Classes:

In consultation with other subjects during Part-II (Second/Final MBBS) as per the common teaching schedule.

Didactic lectures +Seminars +Clinical demonstrations 100 hours

Clinical Training:

During third to ninth semesters, clinical postings of three hours duration daily as specified in the Table below is suggested for paediatrics after Introductory Course in Clinical Methods in Medicine & Surgery of two weeks each for the whole class. TOTAL TEN WEEKS

TABLE III – Timetable (100 hrs)

Semester	Teaching schedule*	
4th and 5th	Lectures (8) Clinical posting (2 wks)	
6th and 7th	Lectures (20) Clinical posting (2+2 wks)	
8th and 9th	Lectures (40) Clinical posting (4 wks) Demonstration/training Practical demonstration	tutorial

**Additional 8-16 hours of Integrated Seminars*

Clinical Training (9.00 a.m.-12.00 noon)

Tutorials cum demonstration (during first one week)

LIST OF LECTURE/ SEMINARS (Syllabus)

Lectures : 4th / 5th 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.

Lectures : 6th / 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. Paediatric 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)

Books Recommended

Text Books

1. Ghai,
2. suraj gupta
3. mehareban singh
4. balram Chaudhari (clinical and theory book)

Reference Books

1. Current Paediatric Diagnosis and Treatment
2. Nelson's Text book of Paediatrics
3. emergency book of meharban singh
4. cloharty of newborn
5. huchinson for clinical methods

Evaluation in Paediatrics

Internal assessment: 20 (Theory 10 +Practical 10)

Plan of Internal assessment in Paediatrics

Marks of Internal Assessment should be sent to University confidentially before the commencement of Theory examination.

Internal examinations

S. No.	Name of examination	Semester	Total marks	Internal assessment marks
1.	Term end exam	8 th	40	2
2.	Term end exam	9 th	40	2
3	Semester practical exam	8 th	40	2
4	Prelims practical exam	9 th	40	4
5	Semester theory exam	8 th	40	5
6	Prelims theory exam	9 th	40	5

University examinations

S. No.	Name of examination	Semester	Total marks
1.	University theory exam (one paper)	9 th	40
2.	University practical exam	9 th	40
3.	Internal assessment marks	8 th and 9 th semester	20
	Total marks		100

Internal assessment in Theory -

1 .Examinations during semesters : This will be carried out by conducting two theory examinations at the end of 8th and 9th semesters (40 marks each).

2 . Preliminary examination : This shall be carried out during 9th semester. One theory papers of 40 marks

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.: 8th and 9th semester. Each examination will be of 40 marks.

Total of 2 examinations – 80 marks ,

2. Prelim examination:

This will be conducted for 40 marks as per university examination pattern

NB: Attendance- 75% attendance is compulsory.

Student must secure atleast 35% marks of the total marks fixed for internal assessment in order to be eligible to appear in final university examination of paediatrics.

UNIVERSITY EXAMINATIONS

Theory :

One paper 40 marks

Oral (Viva) 10 marks

Clinical 30 marks

Internal assessment 20 marks (Theory-10; Practical-10)

Total 100 marks

Pass : a candidate must obtain 50% in aggregate with a minimum of 50% in Theory including orals and minimum of 50% in Practicals/clinicals.

Pattern of theory examination including distribution of marks, questions and time

A. There shall be one theory paper , carrying 40 marks

The paper will be of **2** hours duration.

Instructions:

Answer each section in different answer book.

Figure in the right indicates marks.

SECTION 1

Q.1 will be MCQ. 6-item MCQs (One best response type or one-word answer type) each of 1 mark (Total MCQ marks 6).

And Q.2 Long answer type

SECTION 2

Questions 3-4 will have to be written in separate answer sheets.

Question	Type	Choice	Marks
1	MCQs (6-Items)	No	6
2	Long Answer Type	2 out of 3	5X2=10
3	Short Answer Type	3 out of 4	3 X4=12
4	Short Answer Type	3 out of 4	3 X4=12

B. PRACTICAL (FINAL EXAMINATION) : 40 Marks

One Long Case 20 Marks

One Short Case 10 Marks

C. ORAL (VIVA VOCE) 10 Marks (Duration 10 Minutes)

(Instruments, X-ray, specimens, Drugs, Emergency in Paediatrics.) It is directed to interpretation of investigations