

MEDICAL SCIENCE

CODE-31

The questions and answers expected in the syllabus areas prescribed for this examination will be of what is normally covered in a M.B.B.S. curriculum. Knowledge of the frontier areas of these topics will also be expected of the candidates.

PAPER-I

HUMAN ANATOMY

Gross and microscopic anatomy and movements of shoulder, hip and knee joints.

Gross and microscopic anatomy and blood supply of lungs, hearts, kidneys, liver, testis and uterus.

Gross anatomy of pelvis, perineum and inguinal region. Gross-sectional anatomy of the body at mid-thoracic, upper abdominal & pelvic regions.

Major steps in the development of lung, heart, kidney, urinary bladder, uterus, ovary, testis and their common congenital abnormalities.

Placenta and placental barrier.

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Neural pathways for cutaneous sensations and vision.

Cranial nerves III, IV, V, VI, VII, X, distribution and clinical significance.

Anatomy of autonomic control of gastrointestinal, respiratory and reproductive systems.

HUMAN PHYSIOLOGY

Nerve and muscle excitation, conduction and transmission of impulse, mechanism of contraction neuromuscular transmission.

Synaptic transmission, reflexes, control of equilibrium posture and muscle tone. Descending pathways; functions of cerebellum, basal ganglia, reticular formation, hypothalamus limbic system and cerebral cortex.

Physiology of sleep and consciousness E.E.G. Higher Functions of the brain.

Vision and hearing. Mechanism of action of hormones; formation, secretion transport, metabolism, functions and regulation of secretion of pancreas and pituitary glands.

Menstrual cycle; location; pregnancy. Development, regulation and fate of blood cells.

Cardiac excitation, spread of cardiac impulse, E.C.G. Cardiac output,

Blood Pressure, Regulation of Cardiovascular functions.

Mechanism of action, dosage and toxicity of the following antibiotics-

- Ampicillin -- Chloramphenicol
- Cephalexin -- Rifampin
- Doxycycline -- Cefotaxime.

Indications, dosage, side-effect and contraindications of the following anti-cancer drugs:-

- Methotrexate -- Tamoxifen
- Vincristin

Classification, route of administration, mechanism of action and side effects of the following:-

- General anaesthetics -- Analgesics
- Hypnotics.

FORENSIC MEDICINE AND TOXICOLOGY

Forensic examination of injuries and wounds.

Physical and chemical examination of blood and seminal stains.

Details of forensic examination for establishing identification of persons, pregnancy, abortion, rape and virginity.

PAPER-II

GENERAL MEDICINE

Etiology, clinical features, diagnosis and principles of managements (including prevention) of :

- Rheumatic, ischaemic and congenital heart diseases hypertension.
- Acute and chronic respiratory infections, bronchial asthma.
- Malabsorption syndromes; acid peptic diseases.
- Viral hepatitis, cirrhosis of liver.
- Acute glomerulonephritis; chronic pyelonephritis renal failure.
- Diabetes mellitus.
- Anaemias coagulation disorders; leukaemias.
- Meningitis, encephalitis, cerebrovascular diseases.
- Common psychiatric disorders, schizophrenia.

GENERAL SURGERY

Clinical features, causes, diagnosis and principles of management of :-

- Cervical lymph- node enlargement, parotid tumour, oral cancer, cleft palate, hairy lip
- Peripheral arterial diseases, varicose veins, filariasis, pulmonary embolism.
- Disfunctions of thyroid, parathyroids and adrenals, pituitary tumours.
- Abscess of breast, cancer breast
- Acute and chronic appendicitis, bleeding peptic ulcer tuberculosis of bowel, intestinal obstruction, ulcerative colitis.
- Renal mass, acute retention of urine, benign prostatic hypertrophy.

- Splenomegaly, chronic cholecystitis, portal hypertension, liver abscess, peritonitis, carcinoma head of pancreas.
- Direct and indirect inguinal hernias and their complications.
- Fractures of femur and spine.

OBSETETRICS AND GYNAECOLOGY INCLUDING FAMILY PLANNING.

Diagnosis of pregnancy, screening of high risk pregnancy, Fetoplacental development. Labour management Complications of 3rd stage.

Prostpartum haemorrhage, Resuscitation of the newborn. Dignosis and management of anaemia and pregnancy induced hypertension.

Principles of the following contraceptive methods :-

Intra-uterine devices, pills, tubectomy and vasectomy.

Medical termination of pregnancy including legal aspects.

Etiology, clinical features, diagnosis and principles of management of :-

- Cancer Cervix.
- Leucorrhoea, pelvice paid, infertility, abnormal uterine bleeding, amenorrhoea.

PREVENTIVE AND SOCIAL MEDICINE

Concept of causation of disease and control of disease in the community, principles & methods of epidemiology.

Health hazards due to environmental pollution and industrialisation.

Normal nutrition and nutritional deficiency.
Population trends (World and India)

Growth of population and its effect on health and development.

Objectives, components and critical analysis of each of the following National programmes for the central eradication of :-

Malaria, filaria, kala azar, leprosy, tuberculosis, cancer, blindness, lodine deficiency disease. AIDS & STD and fulnea worm.

Objectives, components, critical analysis of each of the following National Health and Family Welfare Programmes :-

- Meternal and child health - Nutrition.
- Family welfare -- Immunisation.