SYLLABUS FOR MEDICAL SCIENCE PAPER-I & II FOR MANIPUR CIVIL SERVICES COMBINED COMPETITIVE (MAIN) EXAMINATION

Paper-I

Section-A

I. **Human Anatomy :** Gross and microscopic anatomy and movements of shoulder, hip and knee joints; Blood supply, nerve innervation of hand, Lymphatic system; Karyotyping, medical genetics; Electron microscopic structure of glomerulous and muscle; Gross and microscopic anatomy and blood supply of lungs, heart, kidneys, liver, testis and uterus; Gross anatomy of pelvis, perineum and inguinal region. Cross-sectional anatomy of the body and mid-thoracic, upper abdominal, mid-abdominal and pelvic regions.

Embryology : Major steps in the development of lung, heart, kidney, urinary bladder, uterus, ovary, testis and their common congenital abnormalities; Placenta and placental barrier.

Anatomy of central and peripheral autonomic nervous system :

Neural pathways for cutaneous sensations and vision; Cranial nerves, distribution and clinical significance; Anatomy of autonomic control of gastronintestinal, respiratory and reproductive systems.

II. **Human Physiology :** Central, peripheral and autonomic nervous. system; Nerve and muscle excitation, conduction and transmission of impulse, mechanism of contraction, neurovascular transmission, EMG; Synaptic transmission, reflexes, control of equilibrium, posture and muscle tone descendig pathways, functions of creebellum, basal ganglia, reticular formation, hypothalamus limbic system and cerebral cortex; Physiology of sleep and consciousness, EEG.; Higher functions of the brain; Vision and hearing.

Endocrine system : Mechanism of action of hormones, formation, secretion, transport, metabolism, functions and regulations of secretion of pancreas and pituitary glands.

Physiology of reproductive system : menstrual cycle, lactation, pregnancy.

Blood : Development, regulations and fate of blood cells.

Cardio-vascular, respiratory gastro-intestinal and renal physiology : Cardiac excitation, spread of cardiac impulse, ECG., cardiac output, blood pressure, regulation of cardiovascular functions; Mechanics of respiration and regulation of respiration; Digestion and absorption of food, regulation of secretion and motility of gastrointesinal tract; Glomerular and tubular fucntions of kidney.

III. **Biochemistry :** pH and pK Hendrson-Hassebalch Equation; Properties and regulation of enzyme activity, role of high energy phosphates in bioenergetics; Sources, daily requirements, action and toxicity of vitamins; Metabolism of lipids, carbohydrates, proteins, disorders of their metabolism; Chemical nature, structure, synthesis and fucntions of nucleic acids and proteins; Distribution and regulation of body water and minerals including trace elements; Blood Gas Analysis, GTT, Immuno electrophorises, molecular structure of muscle contractile protein, oestrogen receptors.

SYLLABUS FOR MEDICAL SCIENCE PAPER-I & II FOR MANIPUR CIVIL SERVICES COMBINED COMPETITIVE (MAIN) EXAMINATION

Section-B

I. **Pathology :** Rection of cell and tissue of injury, inflammation and repair , disturbances of growth and cancer. genetic diseases; Pathogenesis and histopathology of Rheumatic and ischaemic heart disease; Bronchogenic carcinoma, carcinoma breast, oral cancer, cancer colon. Lymphoma, leukaemia, liver cancer, meningioma and meningitis; Etiology, pathognesis and histopathology of - Peptic ulcer, cirrhosis liver glomerulonephritis, lobar pneumonia, acute osteomyelitis, hepatitis, acute pancreatitis.

II. **Microbiology :** Growrth of micro-organisms, sterilization and disinfection, bacterial genetics, virus-cell interactions; Immunological principles, acquired immunity, immunity in infections cause by viruses; Diseases caused by and laboratory diagnosis of Staphylococcus, enterococcus, salmonella, shigella, secheichiza, pseudomonos, vibrio, adenoviruses, herpes viruses (including rubella_, fungi, protozoa, helminths, leptospiral infection.

III. **Pharmacology :** Drug receptor instruction, mechanism of drug action; Mechanism of action, dosage, metabolism and side effects of - Pilocarpine, terbutaline, metoprolol diazepam, acetylsalicylic acid, ibuprofen, furosemide, metronidazole. Chloroquin. Mechanism of action, dosage and toxicity of- Ampicillin, Cephalosporins, 1,2,3,4,th generations, Aminoglycoside, Doxycycline, chloramphenicol, rifampin, Calcium channel blocker, beta blocker, ace inhibitors, immunosuppressive therapy. Indications, dosage, side-effects and contraindictions of- Methortrexate, vincristin, tamoxifen. Classification, route of administration, mechanism of action and side effects of - General anaesthetics, hypnotics, analgesics, Anti-viral, anti-fungal drugs.

IV. **Forensic Medicine and Toxicology :** Forensic examination of injuris and wounds; Physical and chemical examination of blood and seminal stains; Organo phosphorous poisoning, sedative overdose, hanging, drowning, burns, snake envenomation.

Paper-II

Section-A

1. **General Medicine :**

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

Malaria, Typhoid, Cholera, Tetanus, Rabies, Exanthematous Fevers, Tuberculosis, AIDS.

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

Rheumatic, ischaemic and congenital heart disease, hypertension. Cardiomyopathy, pulmonary embolism.

Acute and chronic respiratory infections, bronchial asthma.

Occupational lung disease, pleural effusion, disseminated tuberculosis Malabsorption syndromes, acid peptic diseases, haemetemesis. Viral hepatitis, cirrhosis of liver, alcoholic liver disease.

Actue glomerulonerphritis, chronic pyelonephritis, renal failure, nephrotic syndrome, renovascular hypertension, diabeties mellitus, anaemias, coagulation disorders, leukaemia, polycythemia and hyperviscosity syndrome, meningitis encephalitis, carebrovascular diseases.

Role of Immageology in the work-up of medical problems, ultrasound, echo cardiogram, CT scan MRI.

Psychiatry : Common psychiatric disorders, schizophrenia. ECT, lithium

II. **Paediatrics :** Common paediatric problems, congenertal cyanotic heart disease, respiratory distress syndrome, broncho pneumonias, kernicterus. Aids- prevention of vertical transmission.

III. **Dermatology :** Common skin diseases, psoariasis, Hansen's disease, fungal dermatitis, scabies, eczema, vitiligo, Stevan Johnsons's syndrome.

Section-B

I. **General Surgery :**

Clinical features, causes diagnosis and principles of management of:

Cervical lymph node enlargement, parotid tumour, oral cancer, cleft palate, hare lip.

Laryngeal tumour, esophageal tumours.

Peripheral arterial diseases, varicose veins, coarctation of arota

Dysfunctions of thyroid parathyroids and adrenals.

Tumours of Thyroid, Parathyroid, Adrenal, Pituitary Glands.

Abscess of breast, cancer breast, fibroadenoma and adenosis

Acute and chronic appendicitis, bleeding peptic ulcer, tuberculosis of bowel, intestinal obstruction, ulcerative colitis.

Renal mass, acute retention of urine, benign prostatic hypertrophy.

Haemonthorax, constrictive pericarditis

Splenomegaly, chronic cholexystitis, portal hypertension, liver abscess, peritonitis, carcinoma head of pancreas.

Direct and indirect inguinal hernias and their compliations.

Freactures of femur and spine, Colles' fracture and bone tumours.

Organis transplantation, kidney, liver, heart, bone-marrow.

Laprascopic Surgery.

II. **Obstetrics and gynaecology including Family Planning.**

Diagnosis of pregnancy, screening of high risk pregnancy, foetoplacental development.

Labour management, complications of 3rd stage, postpartum haemorrhage, resuscitation of the newborn.

Diagnosis 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 cervic.

Leucorrhoea, pelvic pain, infertility, abnormal uterine bleeding, amenorrhoea.

III. **Preventive and Social medicine.**

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

Health hazards due to environmental pollution and industrialisation.

Normal nutrition and nutritional deficiency diseases in India.

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 control/eradication of:

Malaria, filaria, kala-azar, leprosy, tuberculosis, cancer, blindness, iodine deficiency disease, AIDS & std and guinea worm.

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

Maternal and child health

Family welfare

Nutrition

Immunization.