

Himachal Pradesh Public Service Commission

No. 3-117/2024-PSC (R-I)

Dated 22-04-2025

Syllabus for the descriptive Subject Aptitude Test (SAT) for the recruitment to post of Assistant Professor (General Medicine), Class-I (on regular basis) in the Department of Medical Education & Research, H.P. The SAT shall be of 03 hours duration having 120 Marks. The SAT paper shall have two parts i.e. Part-I and Part-II and cover the following topics of MD (General Medicine) level.

PART-I (60 MARKS)

1. Basics of human anatomy as relevant to clinical practice
 - Surface anatomy of various viscera,
 - Neuro-anatomy,
 - Important structures/organs location in different anatomical locations in the body;
 - Common congenital anomalies,
2. Basic functioning of various organ-system, control of vital functions, patho- physiological alteration in diseased states, interpretation of symptoms and signs in relation to patho-physiology.
3. Common pathological changes in various organs associated with diseases and their correlation with clinical signs; understanding various pathogenic processes and possible therapeutic interventions possible at various levels to reverse or arrest the progress of diseases.
4. Knowledge about various microorganisms, their special characteristics important for their pathogenetic potential or of diagnostic help; important organisms associated with tropical diseases, their growth pattern/life-cycles, levels of therapeutic interventions possible in preventing and/or eradicating the organisms.
5. Knowledge about pharmacokinetics and pharmaco-dynamics of the drugs used for the management of common problems in a normal person and in patients with diseases kidneys/liver etc. which may need alteration in metabolism/excretion of the drugs; rational use of available drugs.
6. Knowledge about various poisons with specific reference to different geographical and clinical settings, diagnosis and management.
7. Research Methodology and Studies, epidemiology and basic Biostatistics.

8. National Health Programmes.
9. Biochemical basis of various diseases including fluid and electrolyte disorders; Acid base disorders etc.
10. Recent advances in relevant basic science subjects.
11. Preventive and environmental issues, including principles of preventive health care, immunization and occupational, environmental medicine and bio- terrorism.
12. **Aging and Geriatric Medicine:**
 - Biology,
 - Epidemiology,
 - Neuro- psychiatric aspects of aging.
13. **Clinical Pharmacology:**
 - Principles of drug therapy,
 - Biology of addiction,
 - Complementary and alternative medicine.
14. **Genetics:**
 - Overview of the paradigm of genetic contribution to health and disease,
 - Principles of Human Genetics,
 - Single gene and chromosomal disorders,
 - Gene therapy,
15. **Immunology:**
 - Innate and adaptive immune systems,
 - Mechanisms of immune mediated cell injury,
 - Transplantation immunology,

PART-II (60 MARKS)

1. **Cardio-vascular diseases:**
 - Approach to the patient with possible cardio- vascular diseases,
 - Heart failure,
 - Arrhythmias,
 - Hypertension,
 - Coronary artery disease,
 - Valvular heart disease,
 - Infective endocarditis,
 - Diseases of the myocardium and pericardium,
 - Diseases of the aorta and peripheral vascular system.

2. Respiratory system:

- Approach to the patient with respiratory disease,
- Disorders of ventilation,
- Asthma,
- Congenital Obstructive Pulmonary Disease (COPD),
- Pneumonia,
- Pulmonary embolism,
- Cystic fibrosis,
- Obstructive sleep apnoea syndrome and diseases of the chest wall, pleura and mediastinum.

3. Nephrology:

- Approach to the patient with renal diseases,
- Acid-base disorders,
- Acute kidney injury,
- Chronic kidney disease,
- Tubulo-interstitial diseases,
- Nephrolithiasis,
- Diabetes and the kidney,
- Obstructive uropathy and treatment of irreversible renal failure,

4. Gastro-intestinal diseases:

- Approach to the patient with gastrointestinal diseases,
- Gastrointestinal endoscopy,
- Motility disorders,
- Diseases of the oesophagus,
- Acid peptic disease,
- Functional gastrointestinal disorders,
- Diarrhoea,
- Irritable bowel syndrome,
- Pancreatitis and diseases of the rectum and anus,

5. Diseases of the liver and gall bladder:

- Approach to the patient with liver disease,
- Acute viral hepatitis,
- Chronic hepatitis,
- Alcoholic and non-alcoholic steatohepatitis,
- Cirrhosis and its sequelae,
- Hepatic failure and liver transplantation,
- Diseases of the gall bladder and bile ducts,

6. Haematologic diseases:

- Haematopoiesis,
- Anaemias,
- Leucopenia and leucocytosis,
- Myelo-proliferative disorders,
- Disorders of haemostasis and haemopoietic stem cell transplantation,

7. Oncology:

- Epidemiology,
- Biology and genetics of cancer,
- Paraneoplastic syndromes and endocrine manifestations of tumours,
- Leukemias and lymphomas,
- Cancers of various organ systems and cancer chemotherapy,

8. Metabolic diseases - inborn errors of metabolism and disorders of metabolism.

9. Nutritional diseases - nutritional assessment, enteral and parenteral nutrition, obesity and eating disorders.

10. Endocrine - principles of endocrinology, diseases of various endocrine organs including diabetes mellitus.

11. Rheumatic diseases:

- Approach to the patient with rheumatic diseases,
- Osteoarthritis,
- Rheumatoid arthritis,
- Spondyloarthropathies,
- Systemic lupus erythematosus (SLE),
- Polymyalgia,
- Rheumatic fibromyalgia and amyloidosis.

12. Infectious diseases:

- Basic consideration in Infectious Diseases,
- Clinical syndromes,
- Community acquired clinical syndromes,
- Nosocomial infections,
- Bacterial diseases - General consideration, diseases caused by gram - positive bacteria, diseases caused by gram - negative bacteria
 - miscellaneous bacterial infections,
 - Mycobacterial diseases,
 - Spirochetal diseases,
 - Rickettsia,
 - Mycoplasma and Chlamydia,
 - Viral diseases,
 - DNA viruses,

- DNA and RNA respiratory viruses,
- RNA viruses,
- Fungal infections, protozoal and helminthic infections.

13. Neurology - approach to the patient with neurologic disease, headache, seizure disorders and epilepsy, coma, disorders of sleep, cerebrovascular diseases, Parkinson's disease and other movement disorders, motor neuron disease, meningitis and encephalitis, peripheral neuropathies, muscle diseases, diseases of neuromuscular transmission and autonomic disorders and their management.

14. The mental condition characterized by complete self absorption with reduced ability to communicate with the outside world (Autism), abnormal functioning in social interaction with or without repetitive behaviour and/or poor communication etc.

15. Dermatology:

- Structure and functions of skin,
- Infections of skin,
- Papulo- squamous and inflammatory skin rashes,
- Photo-dermatology,
- Erythroderma,
- Cutaneous manifestations of systematic diseases,
- Bullous diseases,
- Drug induced rashes,
- Disorders of hair and nails,
- Principles of topical therapy.

16. Recent advances.