

Himachal Pradesh Public Service Commission

No. 3-116/2024-PSC (R-I)

Dated 22-04-2025

Syllabus for the descriptive Subject Aptitude Test (SAT) for the recruitment to post of Assistant Professor (General Surgery), Class-I (Gazetted) (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 MS (Surgery/General Surgery) level.

PART-I (30 MARKS)

1. General Topics:-

- History of medicine with special reference to ancient Indian texts,
- Health economics - basic terms, health insurance,
- Medical sociology, doctor-patient relationship, family adjustments in disease, organizational behaviour, conflict resolution,
- Computers - record keeping, computer aided learning, virtual reality, robotics,
- Hazards in hospital and protection: AIDS, hepatitis B, tuberculosis, radiation, psychological,
- Environment protection - bio-medical waste management,
- Surgical audit, evidence based surgical practice, quality assurance,
- Concept of essential drugs and rational use of drugs,
- Procurement of stores and material & personal management,
- Research methodology - library consultation, formulating research, selection of topic, writing thesis protocol, preparation of consent form from patients,
- Bio-medical statistics, clinical trials,
- Medical ethics,
- Consumer protection,
- Newer antibiotics,
- Problem of resistance,
- Sepsis – SIRS,
- Nosocomial infection,
- Advances in imaging technologies,
- Disaster management, mass casualties, Triage,
- O.T. design, technologies, equipment,
- Critical care in surgical practice,
- Response to trauma,
- Wound healing,
- Fluid and electrolyte balance,
- Nutrition,

- Blood transfusion,
- Brain death,
- Cadaveric organ retrieval.

2. Clinical cases and Symptoms-based approach to the patient with:

- Ulcers in oral cavity,
- Solitary nodule of the thyroid,
- Lymph node in the neck,
- Suspected breast lump,
- Benign breast disease,
- Acute abdominal pain,
- Blunt Trauma Abdomen,
- Gall stone disease,
- Dysphagia,
- Chronic abdominal pain,
- Epigastric mass,
- Right hypochondrium mass,
- Right iliac fossa mass,
- Renal mass,
- Inguino-scrotal swelling,
- Scrotal swelling,
- Gastric outlet obstruction,
- Upper gastrointestinal bleeding,
- Lower gastrointestinal bleeding,
- Anorectal symptoms,
- Acute intestinal obstruction,
- Obstructive jaundice,
- Acute retention of Urine,
- Bladder outlet obstruction,
- Haematuria, Peripheral vascular disease,
- Varicose veins,
- New born with developmental anomalies,
- Hydronephrosis , Pyonephrosis, perinephric abscess,
- Renal tuberculosis,
- Renal tumors,
- Carcinoma prostate,
- Genital tuberculosis in male.

PART-II (90 Marks)

1. Systemic Surgery:-

- Wound healing including recent advances,
- Asepsis, antisepsis, sterilization and universal precaution,
- Surgical knots, sutures, drains, bandages and splints,
- Surgical infections, causes of infections, prevention,
- Common aerobic and anaerobic organisms and newer organisms causing infection including Helicobacter Pylori,
- Tetanus, gas gangrene treatment & prevention,
- Chronic specific infections TB, Filariasis,
- Boils, cellulites, abscess, necrotizing fasciitis and synergistic infection,
- Antibiotic therapy rationale including antibiotic prophylaxis, misuse, abuse,
- Hospital acquired nosocomial infection causes and prevention including MRSA etc.
- HIV, AIDS and Hepatitis B & C, Universal precautions when dealing with patients suffering from these diseases,
- Fluid and electrolyte balance including acid – base disturbance, consequences, interpretation of blood gas analysis data and management,
- Rhabdomyolysis and prevention of renal failure,
- Shock (septicaemic, hypovolaemic, Neurogenic, anaphylactic), etiology, pathophysiology and management,
- Blood and blood components, transfusion indication, contraindication, mismatch and prevention and management of complications of massive blood transfusion,
- Common preoperative preparation (detailed preoperative workup, risk assessment according to the disease and general condition of the patient as per ASA grade) and detailed postoperative complications following major and minor surgical procedures,
- Surgical aspects of diabetes mellitus particularly management of diabetic foot and gangrene, preoperative control of diabetes, consequences of hypo- and hyperglycaemia in a postoperative setting,
- Consequences and management of bites and stings including snake, dog, human bites,
- Mechanisms and management of missile, blast and gunshot injuries,
- Organ transplantation: Basic principles including cadaver donation, related Human Organ Transplant Acts, ethical and medicolegal aspects,
- Nutritional support to surgical patients,
- Common skin and subcutaneous condition,
- Sinus and fistulae, pressure sores,
- Acute arterial occlusion, diagnosis and initiate management,

- Types of gangrene, Burger's disease and atherosclerosis,
- Investigations in case of arterial obstruction, amputation, vascular injuries: basic principles and management,
- Venous disorders: Varicose veins,
- Diagnosis, principles of therapy, prevention of DVT: basic principles and management,
- Lymphatic: Diagnosis and principles of management of lymphangitis and lymphedema,
- Surgical management of Filariasis,
- Burns: causes, prevention and management,
- Wounds of scalp and its management,
- Recognition, diagnosis and monitoring of patients with head injury, Glasgow coma scale,
- Undergo advanced trauma and cardiac support course (certified),
- Recognition of acute cerebral compression, indication for referrals,
- Cleft lip and palate,
- Leukoplakia, retention cysts, ulcers of tongue,
- Oral malignancies,
- Salivary gland neoplasms,
- Branchial cyst, cystic hygroma,
- Cervical lymphadenitis nonspecific and tuberculous, metastatic lymph nodes and lymphomas,
- Diagnosis and principles of management of goitre,
- Thyroglossal cyst and fistula,
- Thyrotoxicosis,
- Thyroid neoplasms,
- Management of solitary thyroid nodule,
- Thoracic outlet syndrome,
- Management of nipple discharge,
- Breast abscess,
- Clinical breast examination, breast self examination,
- Screening and investigation of breast lump,
- Concept of Single Stop Breast Clinic,
- Cancer breast diagnosis, staging and multimodality management (common neoadjuvant and adjuvant and palliative chemotherapy protocols and indications of radiation and hormonal therapy, pathology and interpretation of Tumour Markers, breast cancer support groups and counseling),
- Recognition and treatment of pneumothorax, haemothorax,
- Pulmonary embolism: Index of suspicion, prevention/recognition and treatment,
- Flail chest, stove in chest,
- Postoperative pulmonary complication,
- Empyema thoracis,
- Recognition of oesophageal atresia and principles of management,

- Neoplasms of the lung including its prevention by tobacco control,
- Cancer oesophagus: principles of management including importance of early detection and timely referral to specialist,
- Achalasia cardia,
- Gastro-esophageal reflux disease (GERD),
- Congenital hypertrophic pyloric stenosis,
- Aetiopathogenesis, diagnosis and management of peptic ulcer including role of H. Pylori and its diagnosis and eradication,
- Cancer stomach,
- Signs and tests of liver dysfunction,
- Amoebic liver abscess and its non-operative management,
- Hydatid cyst and its medical and surgical management including laparoscopic management,
- Portal hypertension, index of suspicion, symptoms and signs of liver failure and timely referral to a specialist center,
- Obstructive jaundice with emphasis on differentiating medical vs surgical Jaundice, algorithm of investigation, diagnosis and surgical treatment options,
- Neoplasms of liver,
- Rupture spleen,
- Indications for splenectomy,
- Clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis including laparoscopic cholecystectomy,
- Management of bile duct stones including endoscopic, open and laparoscopic management,
- Carcinoma gall bladder, incidental cancer gallbladder, index of suspicion and its staging and principles of management,
- Choledochal cyst,
- Acute pancreatitis both due to gallstones and alcohol,
- Chronic pancreatitis,
- Carcinoma pancreas,
- Peritonitis: causes, recognition, diagnosis, complications and principles of management with knowledge of typhoid perforation, tuberculous peritonitis, postoperative peritonitis,
- Abdominal pain types and causes with emphasis on diagnosing early intraabdominal acute pathology requiring surgical intervention,
- Intestinal amoebiasis and other worms manifestation (Ascariasis) and their surgical complications (Intestinal Obstruction, perforation, gastrointestinal bleeding, involvement of biliary tract),
- Abdominal tuberculosis both peritoneal and intestinal Intestinal obstruction,
- **Appendix:** Diagnosis and management of acute appendicitis,
- Appendicular lump and abscess.

▪ **Colon**

- Congenital disorders, Congenital megacolon,
 - Colitis infective / non infective,
 - Inflammatory bowel diseases,
 - Premalignant conditions of large bowel,
 - Ulcerative colitis,
 - Carcinoma colon,
 - Principles of management of types of colostomy.
- **Rectum and Anal Canal:**
- Congenital disorders, Anorectal anomalies,
 - Prolapse of rectum,
 - Carcinoma rectum,
 - Anal Canal: surgical anatomy, features and management of fissures, fistula - in – ano,
 - Perianal and ischiorectal abscess,
 - Haemorrhoids – Non-operative outpatient procedures for the control of bleeding (Banding, cryotherapy, injection) operative options - open and closed haemorrhoidectomy and stapled haemorrhoidectomy,
 - Anal carcinoma,
 - Clinical features, diagnosis, complication and principles of management of inguinal hernia including laparoscopic repair,
 - Umbilical, femoral hernia and epigastric hernia,
 - Open and Laparoscopic repair of incisional/primary ventral hernia,
 - Urinary symptoms and investigations of urinary tract,
 - Diagnosis and principles of management of urolithiasis,
 - Lower Urinary tract symptoms or prostatism,
 - Benign prostatic hyperplasia; diagnosis and management,
 - Genital tuberculosis in male,
 - Phimosi and paraphimosi,
 - Carcinoma penis,
 - Diagnosis and principles of treatment of undescended testis,
 - Torsion testis,
 - Hydrocele, haematocele and pyocele Varicocele: Diagnosis (Medical Board for fitness),
 - Varicocele: Diagnosis (Medical Board for fitness),
 - Acute and chronic epididymo-orchitis,
 - Testicular tumours,
 - Principles of management of urethral injuries,
 - Management of soft tissue sarcoma,
 - Prosthetic materials used in surgical practice,
 - Telemedicine, teleproctology and e-learning,
 - Communication skills.
 - Recent advances in surgery.

