

Himachal Pradesh Public Service Commission

No. 3-64/2023-PSC (R-I)

Dated 22-04-2025

Syllabus for the descriptive Subject Aptitude Test (SAT) for the recruitment to post of Assistant Professor (ENT), 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 (ENT) / Oto-Rhino-Laryngology level.

PART-I (60 MARKS)

1. BASIC SCIENCES RELATED TO OTOLARYNGOLOGY:-

Physiology- Mechanism of perception of smell and taste, mechanism of breathing and voice production, lacrimation, deglutition and salivation. Functional tests of the nose and paranasal sinuses, mechanism of cough and sneezing, Physics of sound, theories of hearing, mechanism of perception of sound and speech production, physiology of equilibrium and cerebral function. Physiology of brain in connection with hearing, speech, smell and phonation. Audiologic tests like audiometry, impedance, evoked potentials, OAE, Speech audiometry, Physiology of larynx, tracheobronchial tree and oesophagus - Histology of mucous membranes, internal ear and other associated organs and structures, nose, PNS NPx, Larynx, Tracheo-Bronchial tree, Lymphoepithelial system, Mechanism of immune system/immunology and genetics, Anatomy-Embryogenesis of ear, nose and throat including palate and the larynx, Oesophagus, trachea and lungs, tongue, salivary gland Head and Neck and skull base etc., Parapharyngeal spaces in the neck including connective tissue barriers of larynx, Applied anatomy of the skull bones, accessory sinuses, external, middle and innerears, nose, PNS, nasopharynx, meninges, brain, pharynx, larynx, trachea and bronchi, lungs, pleurae, oesophagus and the mediastinum, Anatomy of all cranial nerves with their functions.

2. PRINCIPLES AND PRACTICES OF OTOLARYNGOLOGY, AUDIOLOGY AND SPEECH PATHOLOGY:-

Clinical Methodology as applied to ORL HN diseases in adult and children and the accessory sinuses, diagnosis and surgical treatment of diseases of nose, throat and ear in adult and children, Prevention and treatment, infectious diseases of Otolaryngology and Head Neck region, Circulatory and nervous disturbances of the nose, throat and ear and their effects on other organs of the body, Deformities, injuries sinus infections, polyps and the tumors of the

nose, and Paranasal sinuses, Examination of the ear, deafness and allied diseases, complications of diseases of the ear, Injuries, tumors, nervous and circulatory neurological disturbances of the ear, Diagnosis and treatment of tinnitus and vertigo. Diagnosis and rehabilitation of the Hearing handicapped including, dispensing of hearing aid other vibrotatile aids, Surgical pathology of Otolaryngology and Head Neck region, Basic knowledge of anaesthesia as related to ENT, Examination of diseases of children (Paediatric ORL) in connection with throat and larynx, Neurological and vascular disturbances. Congenital and neonatal stridor, Pathology of various diseases of the larynx and throat, tracheobronchial tree and their causative organisms, Indications and various techniques of direct laryngoscopy, nasal endoscopy, Bronchoscopy and oesophagoscopy, including microlaryngoscopic procedures, Reading of radiograms, scans, audiograms, nystagmograms and tympanograms in connection with ENT diseases/disorders, Special apparatus for the diagnosis and treatment of the diseases of ear, nose and throat including audiometer, BERA, Speech analyser etc.

3. **ANATOMY AND PHYSIOLOGY** of Ear, Nose and Throat, Trachea and esophagus, The generation and reception of speech, Radiographic anatomy of the ear, nose, throat and imaging,. Bacteriology in relation to Otorhinolaryngology, Allergy and rhinitis, Haematology in relation to Otolaryngology, Anaesthesia for Otolaryngology, Pharmacology of drugs used in ENT, Electrolyte, fluid balance/shock conditions, Use of teaching aids,. Routine blood, urine testing, Facial nerve stimulation test, Audiometric tests like pure tone Audiometry, Impedance Audiometry, Free field Audiometry, Specialized tests of hearing including SISI, Tone decay, ABLB, Speech discrimination score etc., Vestibular tests like caloric testing (Water and Air) stopping test, Fukuda's test, Evoked response audiometry.

4. **EAR:** The physical and functional examination of the ear, The functional and physical examination of the vestibular system, Tinnitus, Affections of external ear, Repair of deformities of the external ear, Congenital conditions of the middle ear cleft, Traumatic conductive deafness, Acute inflammation of the middle ear cleft, Non-suppurative otitis media, Chronic suppurative otitis media, Management of chronic suppurative otitis media, Complications of infections of middle ear, Tumors of the middle ear cleft and temporal bone, Diseases of the otic capsule-otosclerosis, Diseases of the otic capsule-other diseases, The deaf child, Acoustic neuroma, Ototoxicity, Presbycusis, Diagnosis and management of sudden and fluctuant sensorineural hearing loss, Meniere's disease, Neurologic aspects of vertigo, Facial

paralysis, Rehabilitation of adults with acquired Hearing loss-Hearing aids, The cochlear Implants, Nystagmus, Otoacoustic emissions, Traumatic lesions of the inner ear, Inflammatory lesions of the vestibular and auditory nerve, Vascular lesions of the inner ear,. Electronystagmography, Skull base/Neurologic surgery, **NOSE:** Examination of the nose, Conditions of the external nose, Injuries of the facial skeleton, Congenital diseases of the nose, The nasal septum, Foreign bodies in the nose, rhinolith, Epistaxis, Acute chronic inflammations of the nasal cavities, Vasomotor rhinitis-allergic and non-allergic, Nasal polyposis, Abnormalities of smell, Acute sinusitis, Chronic sinusitis, Nasal Allergy/Fungal allergic sinusitis, Complications of acute and chronic sinusitis, Tumors of nose and sinuses, Facial pains, Trans-ethmoidal hypophysectomy, Functional endoscopic sinus surgery (FESS), Cosmetic surgery of the nose, Non-healing granuloma of the nose, Surgery of the pterygopalatine fossa, LASER Surgery, **THROAT:** Methods of examination of the mouth and pharynx, Diseases of the mouth, Diseases of the salivary glands, Pharyngeal lesions associated with general diseases, Diseases of the tonsils and adenoids (excluding neoplasms), Tumors of the pharynx, Hypopharyngeal diverticulum (Pharyngeal Pouch), Methods of examining and larynx and tracheobronchial tree, Congenital diseases of the larynx, Laryngeal disorders in singers and other voice users, Neurological affections of larynx and pharynx, Intubation of the larynx, laryngotomy and tracheostomy, Cervical node dissection, Skin grafts in Otolaryngology and reconstructive methods including regional and distant flaps for repair of defects after excision of tumors or trauma, Micro laryngeal surgery/thyroplasty, Oesophageal conditions in the practice of ear, nose and throat surgery, Disorders of speech, Lower respiratory conditions in Otolaryngology

PART-II (60 MARKS)

1. RECENT ADVANCES IN OTOLARYNGOOGY AND HEAD SURGERY:-

Recent developments in the diagnosis, pathogenesis and treatment of the ENT diseases, The knowledge of the frontiers of the oto-laryngology and lateral skull base surgery, Rhinoplasty, endoscopic sinus surgery, and anterior cranial fossa surgery, Knowledge of LASERS and fibre optics, Other methods of managing Hearing loss, Implantable hearing aids cochlear implants, Phonosurgery, Etiology and Managements of sleep apnoea/snoring, Hypophysectomy and optic nerve decompressions, Immunotherapy and modalities of the gene therapy, Newer techniques for Radiotherapy including, use of gamma knife for

treatment of Intracranial tumors and other malignancy, Chemotherapy of cancer, recent advances: Robotic Surgery in ENT & HNS.

2. GENERAL SURGICAL PRINCIPLES AND HEAD-NECK SURGERY:-

General Surgery, Head and Neck oncology, and Medicine as applicable to the ENT disorders/diseases, Surgery of congenital deformities of nose, ear (Pinna) and trachea/oesophagus etc., Radiology, Imaging – computed tomography and magnetic resonance imaging, (MRI) and intervention radiology and angiography as related to ENT, General Pathologic aspects such as wound healing and also pathology and Pathogenesis of ENT diseases, Pharmacology, molecular biology, genetics, cytology, haematology, and immunology as applicable to otolaryngology, General Principles of faciomaxillary traumatology and neck injury, Plastic Surgery as applicable to Otolaryngology

3. MISCELLANEOUS AND HEAD AND NECK:

Cranial nerves, Raised intracranial tension-causes, diagnosis, management with particular reference to otitis hydrocephalus, Head injuries and I.C. Haemorrhage, Pituitary gland, anatomy, physiology hypo - and hyper - pituitarism, new growths, Intracranial venous sinuses and their affections, Osteology: skull, mandible cervical and thoracic vertebral sternum, Cervical fascia, facial spaces in neck, retro-pharyngeal and parapharyngeal Abscesses, Anatomy and physiology of thyroid gland, goitre, diseases of the thyroid and carcinoma of thyroid, Large blood vessels in neck, thoracic duct development of major cervical and thoracic blood vessels, Head and neck reconstructive surgery, Functional Anatomy of cerebellum and brainstem, Anatomy of mediastinum, Pleura, plural cavity, broncho-pulmonary segments and their clinical importance, Facial plastic surgery.

4. DRUGS USED IN ENT:-

Antibiotics Antihistaminic, Nasal vasoconstrictors, Local anaesthetics, Corticosteroids, Cytotoxic agents, Antibiotics, Radioactive isotopes, Antifungal agents, Vasopressive and other agents used in shock like states.

5. GENERAL: Physiology of circulation, regulation of blood pressure, reactions of body to haemorrhage, patho-physiology of shock, fluid balance, blood transfusion and its hazards, fluid replacement therapy, burns, Agents used in shock like states.