

Guidelines
for
Competency Based Training Programme
in
DNB- OTORHINOLARYNGOLOGY (ENT)



NATIONAL BOARD OF EXAMINATIONS

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PROGRAMME GOAL

The goal of the DNB ENT is to produce a competent ENT specialist who recognizes the health needs of ENT Patients

PROGRAMME OBJECTIVES

At the end of DNB training the student should be able to:

- Practice the specialty ethically keeping in mind the requirement of the patient, community and people at large.
- Demonstrate sufficient understanding of basic sciences related to the specialty and be able to integrate such knowledge in the Clinical practice.
- Diagnose and manage majority of conditions in the specialty (clinically and with the help of relevant investigations)
- Plan and advice measures for the promotive, preventive and rehabilitative aspects of health and diseases in the field of ENT.
- Play the assigned role in the implementation of National Health Programs like National program for prevention and control of deafness and awareness of other National programs
- Demonstrate competence in basic concepts of research methodology and writing thesis and research papers.
- Develop good learning, communication and teaching skills.
- Demonstrate communicative skills explaining management, prognosis providing counseling and health education to the patient
- Acquire in-depth knowledge in the subject including recent advances.
- Fully conversant with the bedside procedures and have knowledge of latest diagnostics & therapeutics available.

- Manage ENT emergencies
- Demonstrate empathy and humane approach towards the patient and their family and respect their emotions

ELIGIBILITY CRITERIA FOR ADMISSIONS TO THE PROGRAMME

(A) DNB ENT Course:

1. Any medical graduate with **MBBS** qualification , who has qualified the **Entrance Examination** conducted by NBE and fulfill the eligibility criteria for admission to DNB **Broad Specialty** courses at various NBE accredited Medical Colleges/ institutions/Hospitals in India is eligible to participate in the Centralized counseling for allocation of DNB ENT seats purely on merit cum choice basis.
2. Admission to 3 years post MBBS DNB ENT course is only through **Entrance Examination** conducted by NBE and Centralized Merit Based Counseling conducted by National Board of Examination as per prescribed guidelines.

(B) DNB (Post diploma) ENT Course:

1. Any medical graduate with MBBS qualification who has successfully completed **DLO** (and fulfill the eligibility criteria for admission to DNB (Post Diploma) Broad Specialty courses at various NBE accredited Medical Colleges/ institutions/Hospitals in India is eligible to participate in the Centralized counseling for allocation of DNB (Post Diploma) ENT seats purely on merit cum choice basis.
2. Admission to 2 years post diploma DNB ENT course is only through PDCET Centralized Merit Based Counseling conducted by National Board of Examination as per prescribed guidelines.

Duration of Course:

For Primary candidates : 3 years
For Secondary Candidates : 2 years

Every candidate admitted to the training programme shall pursue a regular course of study (on whole time basis) in the concerned recognized institution under the guidance of recognized post graduate teacher for assigned period of the course.

TEACHING AND TRAINING ACTIVITIES

The fundamental components of the teaching programme should include:

1. Case presentations & discussion- once a week
2. Seminar – Once a week
3. Journal club- Once a week
4. Grand round presentation (by rotation departments and subspecialties)- once a week
5. Faculty lecture teaching- once a month
6. Clinical Audit-Once a Month
7. A poster and have one oral presentation at least once during their training period in a recognized conference.

The rounds should include bedside sessions, file rounds & documentation of case history and examination, progress notes, round discussions, investigations and management plan) interesting and difficult case unit discussions.

The training program would focus on knowledge, skills and attitudes (behavior), all essential components of education. It is being divided into theoretical, clinical and practical in all aspects of the delivery of the rehabilitative care, including methodology of research and teaching.

Theoretical: The theoretical knowledge would be imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs. These are considered necessary in view of an inadequate exposure to the subject in the undergraduate curriculum.

Symposia: Trainees would be required to present a minimum of 20 topics based on the curriculum in a period of three years to the combined class of teachers and students. A free discussion would be encouraged in these symposia. The topics of the symposia would be given to the trainees with the dates for presentation.

Clinical: The trainee would be attached to a faculty member to be able to pick up methods of history taking, examination, prescription writing and management in rehabilitation practice.

Bedside: The trainee would work up cases, learn management of cases by discussion with faculty of the department.

Journal Clubs: This would be a weekly academic exercise. A list of suggested Journals is given towards the end of this document. The candidate would summarize and discuss the scientific article critically. A faculty member will suggest the article and moderate the discussion, with participation by other faculty members and resident doctors. The contributions made by the article in furtherance of the scientific knowledge and limitations, if any, will be highlighted.

Research: The student would carry out the research project and write a thesis/ dissertation in accordance with NBE guidelines. He/ she would also be given exposure to partake in the research projects going on in the departments to learn their planning, methodology and execution so as to learn various aspects of research.

SYLLABUS

SYLLABUS

- Molecular biology
- Genetics
- Gene therapy
- Mechanisms of anticancer drugs
- Radiotherapy and radiosensitizers
- Apoptosis and cell death
- Stem cells
- Soft and hard tissue repair
- Skin flap physiology
- Biomaterials, tissue engineering and their applications
- Immunology- Defense mechanisms
- Allergy: basic mechanisms and tests
- Evaluation of the immune system
- Primary immunodeficiencies
- Rheumatological diseases
- Microorganisms
- Viruses and antiviral agents
- Fungi
- Antimicrobial therapy
- HIV and otolaryngology
- Blood groups, blood components and alternatives to transfusion
- Haemato-oncology
- Haemostasis: normal physiology, disorders of haemostasis and thrombosis and their management
- The pituitary gland: anatomy, physiology, imaging and tests of function
- The thyroid gland: anatomy, physiology, tests of function and imaging
- The thyroid: nonmalignant disease
- The parathyroid glands: anatomy, physiology, tests of function and imaging Parathyroid dysfunction: medical and surgical therapy
- Head and neck manifestations of endocrine disease
- ENT Manifestations of Endocrine diseases
- Drug administration and monitoring
- Corticosteroids in otolaryngology
- Drug therapy in otology
- Drug therapy in rhinology
- Drug therapy in laryngology and head and neck surgery
- Preparation of the patient for surgery
- Recognition and management of the difficult airway

- Adult anaesthesia
- Paediatric anaesthesia
- Adult critical care
- Paediatric intensive care
- General Consideration of Anesthesia and Management of the Difficult airway
- Surgical management of the difficult adult airways
- Tracheostomy
- Overview of Diagnostic Imaging of the Head and Neck
- Pharyngitis in Adults
- Deep Neck and Odontogenic Infections
- Head and Neck Manifestations in the Immuno compromised Host
- Nasal Manifestations of Systemic Disease
- Laryngeal and Tracheal Manifestations of Systemic Diseases
- Oral manifestations of Systemic Diseases
- Autoimmune Inner Ear Diseases
- Otolaryngology in the Elderly
- Pain Management
- Sleep Apnea and Sleep Disorders
- Aesthetic Facial Analysis
- Scar Revision, Keloide and Camouflage
- Facial Trauma: Soft tissue Lacerations and Burns
- Maxillofacial Trauma
- Reconstruction of Facial Defects
- Meatoplasty
- Otoplasty
- Nasal Septum
- Nasal Fractures
- Rhinoplasty
- Special Rhinoplasty Techniques
- Allergy and Immunology of the Upper airways
- Physiology of Olfaction
- Objective Assessment of Nasal Function
- Radiology of the Nasal Cavity and Paranasal Sinuses
- Epistaxis
- Non-allergic Rhinitis
- Fungal Rhinosinusitis
- Benign Tumors of the Sinonasal Tract
- Primary Sinus Surgery
- Revision surgery for Rhinosinusitis, causes for failure and management of complications of endoscopic sinus surgery
- Management of the Frontal sinus
- Cerebrospinal Fluid Rhinorrhea
- Endoscopic Dacryocystorhinostomy

- Laryngeal and Pharyngeal Function
- Visualization of the Larynx
- Voice Evaluation and therapy
- Neurological evaluation of the Larynx and Pharynx
- Neurological Disorders of the Larynx
- The Professional Voice
- LASER Surgery: Basic Principles and safety considerations
- Benign Vocal Fold Mucosal Disorders
- Acute and Chronic Laryngitis
- Medialization Thyroplasty
- Arytenoid Adduction and Abduction
- Laryngeal Reinnervation
- Chronic Aspiration
- Laryngeal and Esophageal Trauma
- Surgical Management of Upper Airway Stenosis
- Diseases of Esophagus
- Transnasal Esophagoscopy
- Zenker Diverticulum
- Tracheobronchial Endoscopy
- Human Papillomavirus and Epidemiology of Head and Neck Cancer
- Chemotherapy and Targeted Biological Agents for Head and Neck Squamous cell Carcinoma
- Integration of Palliative and Curative Care Strategies
- Management of Cutaneous Head and Neck Melanoma
- Malignancies of the Paranasal Sinus
- Physiology of the Salivary glands
- Diagnostic Imaging and Fine Needle Aspiration of the Salivary glands
- Inflammatory Disorders of the Salivary glands
- Benign Neoplasm of the salivary glands
- Malignant Neoplasm of the salivary glands
- Physiology of the Oral cavity
- Oral Mucosal lesions
- Odontogenesis, odontogenic cysts and Odontogenic Tumors
- Temporomandibular Joint Disorders
- Benign Tumors and Tumorlike Lesions of the Oral cavity
- Malignant Neoplasms of the Oral cavity
- Reconstruction of the Mandible
- Prosthetic management of Head and Neck Defects
- Tumors of the Nasopharynx
- Malignant Neoplasm of the Oropharynx
- Transoral Approaches to Malignant tumors of the Nasopharynx
- Reconstruction of Oropharynx
- Mechanism of Normal and Abnormal Swallowing
- Diagnostic Imaging of the pharynx and esophagus

- Neoplasm of the Hypopharynx and cervical Esophagus
- Radiotherapy and Chemotherapy of Squamous cell Carcinoma of the Hypopharynx and Esophagus
- Reconstruction of the Hypopharynx and Esophagus
- Diagnostic Imaging of the larynx
- Malignant tumors of the larynx
- Management of Early Glottic Cancer
- Transoral LASER Microsection of Advanced laryngeal tumors
- Conservation laryngeal surgery
- Total laryngectomy and laryngopharyngectomy
- Radiation therapy for cancer of the larynx and hypopharynx
- Vocal and speech rehabilitation after laryngectomy
- Diagnosis and management of tracheal neoplasms
- Differential diagnosis of Neck masses
- Revision Rhinoplasty
- Allergy and Immunology of the Upper airway
- Physiology of Olfaction
- Objective Assessment of Nasal Function
- Radiology of the Nasal cavity and Paranasal Sinuses
- Epistaxis
- Non allergic Rhinitis
- Fungal Rhinosinusitis
- Training, accreditation and the maintenance of skills
- Communication and the medical consultation
- Clinical governance: Improving the quality of patient care
- Medical ethics
- Medical jurisprudence and otorhinolaryngology
- Epidemiology
- Outcomes research
- Evidence-based medicine
- Critical appraisal skills
- Recent Advances in Technology
- Functional magnetic resonance imaging: Principles and illustrative applications for otolaryngology
- Positron emission tomography and integrated PET/computed tomography
- Image-guided surgery, 3D planning and reconstruction
- Ultrasound in ear, nose and throat practice
- Interventional techniques
- Laser principles in otolaryngology, head and neck surgery
- Electrophysiology and monitoring
- Optical coherence tomography
- Contact endoscopy
- Pediatric ENT- Introduction
- The paediatric consultation

- ENT input for children with special needs
- Head and neck embryology
- Molecular otology, development of the auditory system and recent advances in genetic manipulation
- Hearing loss in preschool children: screening and surveillance
- Hearing tests in children
- Investigation and management of the deaf child
- Paediatric cochlear implantation
- Congenital middle ear abnormalities in children
- Otitis media with effusion
- Acute otitis media in children
- Chronic otitis media in childhood
- Management of congenital deformities of the external and middle ear
- Disorders of speech and language in paediatric otolaryngology
- Cleft lip and palate
- Craniofacial anomalies: genetics and management
- Vertigo in children
- Facial paralysis in childhood
- Epistaxis in children
- Nasal obstruction in children
- Paediatric rhinosinusitis
- The adenoid and adenoidectomy
- Obstructive sleep apnoea in childhood
- Stridor
- Acute laryngeal infections
- Congenital disorders of the larynx, trachea and bronchi
- Laryngeal stenosis
- Paediatric voice disorders
- Juvenile-onset recurrent respiratory papillomatosis
- Foreign bodies in the ear and the aerodigestive tract in children
- Tracheostomy and home care
- Cervicofacial infections in children
- Diseases of the tonsil
- Tonsillectomy
- Salivary gland disorders in childhood
- Tumours of the head and neck in childhood
- Branchial arch fistulae, thyroglossal duct anomalies and lymphangioma
- Gastro-oesophageal reflux and aspiration
- Diseases of the oesophagus, swallowing disorders and caustic/acid ingestion
- Imaging in paediatric ENT
- Medical negligence in paediatric otolaryngology
- Anatomy of the nose and paranasal sinuses
- Nasal endoscopy

- Physiology of the nose and paranasal sinuses
- Measurement of the nasal airway
- Classification and differential diagnosis of rhinosinusitis
- Allergic rhinitis
- Nonallergic perennial rhinitis
- Occupational rhinitis
- Food allergy and intolerance
- Rhinosinusitis
- Fungal rhinosinusitis
- Specific chronic infections
- Medical management of chronic rhinosinusitis
- Surgical management of rhinosinusitis
- The frontal sinus
- Mucocoeles
- Complications of rhinosinusitis
- Nasal polyposis
- The relationship between the upper and lower respiratory tract
- The septum
- Nasal septal perforations
- The management of hypertrophied turbinates
- Epistaxis
- Nasal fractures
- Fractures of the facial skeleton
- Cerebrospinal fluid rhinorrhoea
- Granulomatous conditions of the nose
- Abnormalities of smell
- Orbital and optic nerve decompression
- Dacryocystorhinostomy
- Conditions of the external nose
- The diagnosis and management of facial pain
- Medical negligence in rhinology
- Surgical anatomy of the neck
- Examination and imaging of the neck
- Neck trauma
- Benign neck disease: infections and swellings
- Anatomy of the mouth and dentition
- Benign oral and dental diseases
- Abnormalities of taste
- Salivary gland anatomy
- Physiology of the salivary glands
- Imaging of the salivary glands
- Non-neoplastic salivary gland diseases
- Cysts and tumours in and around the jaws, including sarcoma
- Anatomy of the pharynx and oesophagus

- Physiology of swallowing
- Functional investigations of the upper gastrointestinal tract
- Acute and chronic pharyngeal infection
- Causes of dysphagia
- Globus pharyngeus
- Pharyngeal pouch
- Oesophageal diseases
- Neurological disease of the pharynx
- Dysphagia: management and intervention
- Management and treatment of intractable aspiration
- Anatomy of the nasopharynx
- Benign conditions of the nasopharynx
- Anatomy of the larynx and tracheobronchial tree
- Assessment and examination of the upper respiratory tract
- Physiology of the larynx
- Voice and speech production
- Objective evaluation of the voice
- Disorders of the voice
- The professional voice
- Speech therapy in ENT practice: scope, science and evidence for intervention
- Phonosurgery
- Acute infections of the larynx
- Chronic laryngitis
- Laryngeal trauma and stenosis
- Introduction of Airway Obstruction
- Recurrent Respiratory Papillomatosis
- Upper airway obstruction
- Tracheostomy
- Physiology of sleep and sleep disorders
- Obstructive sleep apnoea: medical management
- The surgical management of snoring
- Epidemiology of head and neck cancer
- Aetiology of head and neck cancer
- Staging of head and neck cancer
- Data collection in head and neck cancer
- Prognostic indicators and serum markers
- Skin cancer of the head and neck
- Mucosal malignant melanoma
- Nasal cavity and paranasal sinus malignancy
- Juvenile angiofibroma
- Nasopharyngeal carcinoma
- Benign salivary gland tumours
- Malignant tumours of the salivary glands

- Tumours of the parapharyngeal space
- Oral cavity tumours including the lip
- Oropharyngeal tumours
- Tumours of the larynx
- Rehabilitation after laryngectomy
- Tumours of the hypopharynx and oesophagus
- Thyroid cancer
- Management of the patient presenting with neck lymphadenopathy and an unknown primary carcinoma
- Metastatic neck disease
- Developments in radiotherapy for head and neck cancer
- Quality of life in head and neck cancer
- Palliative care for head and neck cancer
- Medical negligence in head and neck surgery
- The history of reconstructive surgery of the head and neck
- Grafts and local flaps in head and neck surgery
- Pedicled flaps in head and neck surgery
- Free flaps in head and neck reconstruction
- Keloids, hypertrophic scars and scar revision
- Principles of osseointegration and the role of prosthetics
- A combined prosthetic and surgical approach to head and neck reconstruction
- Aesthetics, facial proportions and digital planning in facial plastic surgery
- Reduction rhinoplasty
- External rhinoplasty
- Augmentation rhinoplasty
- Revision rhinoplasty
- The deviated nose
- The nasal tip and nasolabial angle
- The nasal valve and its management
- Nasal reconstruction
- Total reconstruction of the pinna
- Blepharoplasty
- The ageing face
- Facial reanimation
- Medical negligence in facial plastic surgery
- The anatomy and embryology of the external and middle ear
- Form and ultrastructure of the cochlea and its central connections
- Anatomy and ultrastructure of the vestibular organ
- Sound vibrations and waves
- Physiology of hearing
- Physiology of equilibrium
- The perception of sound
- Psychoacoustic audiometry

- Evoked physiological measurement of auditory sensitivity
- Prevention of hearing loss: scientific principles
- Clinical examination of the ears and hearing
- Conditions of the pinna and external auditory canal
- Furunculosis
- Bullous myringitis
- Granular myringitis
- Benign necrotizing otitis externa
- Malignant otitis externa
- Keratosis obturans and primary auditory canal cholesteatoma
- Acquired atresia of the external ear
- Otitis externa and otomycosis
- Perichondritis of the external ear
- Relapsing perichondritis
- Exostosis of the external auditory canal
- Foreign bodies in the ear
- Haematoma auris
- Osteoradionecrosis of the temporal bone
- Herpes zoster oticus
- Conditions of the middle ear
- Acute otitis media in adults
- Otitis media with effusion in adults
- Chronic otitis media
- Tuberculosis of the temporal bone
- Otosclerosis
- Paget's disease
- Ear trauma
- Otagia
- Conditions of the cochlea
- Age-related sensorineural hearing impairment
- Noise-induced hearing loss
- Autosomal dominant nonsyndromic sensorineural hearing impairment
- Ototoxicity
- Idiopathic sudden sensorineural hearing loss
- Tinnitus and other dysacusis
- Management of hearing impairment
- Hearing aids
- Bone-anchored hearing aids
- Cochlear implants
- Middle ear implants
- Accessory devices
- Balance disorders
- Pathology of the vestibular system
- Evaluation of balance

- Vertigo: Clinical syndromes
- Vertigo: clinical management and rehabilitation
- Medical negligence in otology
- Retrocochlear and facial nerve disorders
- Retrocochlear hearing disorders, including auditory dyssynchrony
- Central auditory dysfunction
- Disorders of the facial nerve and Rehabilitation
- Anatomy of the skull base and infratemporal fossa
- Clinical neuroanatomy
- Evaluation of the skull base patient
- Vascular assessment and management in skull base surgery
- Natural history of vestibular schwannoma
- Surgical management of vestibular schwannoma
- Gamma knife stereotactic radiosurgery
- Patient with neurofibromatosis 2
- Management of non-acoustic cerebellopontine angle tumours
- Middle fossa surgery
- Jugular foramen lesions and their management
- Petrous apex lesions
- Approaches to the nasopharynx and Eustachian tube
- Tumours of the temporal bone
- Tumours of the facial nerve
- Squamous cell carcinoma of the temporal bone
- Pituitary tumours: medical and surgical management
- Anterior and anterolateral skull base and craniofacial surgery
- Complications of skull base surgery
- Medical negligence in skull base surgery
- Hearing loss in Elderly
- Biomedical waste management
- Biostatistics
- Recent Advances in Technology

Biostatistics, Research Methodology and Clinical Epidemiology

Ethics

Medico legal aspects relevant to the discipline

Health Policy issues as may be applicable to the discipline

Competencies

Skills

Describe embryology, physiology, pathology, clinical features, diagnostic procedures and the therapeutics including preventive methods, (medical/surgical) pertaining to Otorhinolaryngology - Head & Neck Surgery

Pharmacology of the drugs used in ENT, their pharmacokinetics adverse effect and pharmaco-vigilance

Clinical decision making ability & management expertise: Diagnose conditions from history taking clinical evaluation and investigations and develop expertise to manage medically as well as surgically the commonly encountered disorders and diseases in different areas

- Otology & Neurology: External, middle and internal ear diseases, deafness, facial nerve palsy, tinnitus, vertigo and tumours of the region and other related conditions
- Rhinology: Nose and Paranasal sinus disorders and diseases. Acquire surgical skills to do septoplasty, septorhinoplasty, functional endoscopic sinus surgery (FESS) etc. Develop capability to do oncologic diagnosis and therapy planning for proper management of such patients in collaboration with radiotherapists and medical oncologists etc.
- Laryngology: Able to diagnose and manage benign lesions of the larynx including voice-disorders, pharyngeal and nasopharyngeal diseases; Capable to do diagnosis of oncologic conditions such as laryngeal carcinoma and plan its therapy strategies etc.
- Oral cavity and salivary glands: Learn about diseases of oral cavity, Parotid gland and Sub-mandibular gland, Minor Salivary gland diseases and their management etc.
- Head/Neck conditions/diseases: Learn about head and neck tumors, diseases of thyroid gland, neurogenic tumours neck space infections and their management etc.
- Broncho-esophageal region: Learn about broncho-esophageal diseases/disorders such as congenital disorders, diagnosis of foreign bodies in wind/food pipes with their management policies. Capable to

perform Panendoscopy for oncologic evaluation in the head-neck region, including esophageal malignancy etc.

- Plastic reconstruction of congenital defects of head & neck region and acquired defects following major head neck surgery & trauma. Acquire general principles of reconstructive surgery and its referral needs and Recent Advances in ENT including surgical methods etc.
- Traumatology & Facio-maxillary Injury: Acquire knowledge in the management of Traumatology in general and faciomaxillary injury in particular, including nasal fractures. etc.
- Speech Audiology and Rehabilitation: Be capable of identifying and diagnosis of audiological & speech related disorders. Perform different audiological and neuro-otological tests for diagnosis of audiological/vestibular disorders/diseases and capable to interpret these findings and to incorporate their implication in diagnosis and their treatment along with the rehabilitative methods in audiology and speech pathology including hearing aids and other assistive and implantable devices etc.
- Early diagnosis of malignancies and create its awareness in the community/society to eventually get better cooperation from people in health management etc.
- Psychological and social aspect: Some elementary knowledge in clinical Psychology and social work management to be acquired for management of patients, especially those terminally ill and disabled persons and interacting with their relatives etc.
- Radiology in ENT: Acquire knowledge about radiology/imaging and to interpret different radiological procedures and imaging in Otolaryngology- Head and Neck including skull base region. There should be collaboration with Radiology department for such activities etc.
- Pediatric Otorhinolaryngology: Diseases of Ear, Nose, Throat in children including Bronchoesophagology, foreign body etc.
- Allergy, Immunology and Autoimmunity in relation to ENT
- Knowledge of LASER and fibroptics

- Principle of cancer immunotherapy and immune modulation Knowledge of Chemotherapy and Radiotherapy in ENT and head and neck tumors along with radiotherapy, chemotherapy and immune modulation
- Principle of Radiotherapy and its application in ENT, Head and Neck Neoplasia
- Principle of Nuclear medicine in relation to ENT
- Endocrinal disorders related to ENT
- Role of Genetics and gene therapy in ENT Disorders
- Hematology in relation to ENT
- Should have knowledge of ENT disorders in Geriatrics including Deafness due to aging and its management.
- Principles of Jurisprudence and Ethical issues related to ENT
- Basic knowledge of anesthesia related to ENT
- Knowledge of devices and prosthesis in ENT
- Should have basic knowledge and principle of general surgical skills, suture material used in surgery, sterilization technique, wound healing, Shock and Fluid management etc.
- Should have knowledge of blood transfusion and adverse reaction and its management.
- Should have knowledge of relevant simulators to acquire diagnostics and management skills.
- Research: Develop ability to conduct a research enquiry on clinical materials available in Hospital and in the community.
- Patient doctor relation: Develop ability to communicate effectively with the patient and his/her relatives pertaining to the disease condition, its severity, prognosis and options available for the treatment/therapy.
- Preventive Aspect: Acquire knowledge about prevention of relevant conditions such as middle ear and sinus infection, and others hereditary deafness and early diagnosis of head-neck malignancy etc. Hence, resident should know about the preventive Otorhinolaryngology (ENT)

- Presentation of Seminar/paper: Should develop public speaking ability and should be able to make presentation on disease-conditions/research topics to fellow colleagues in a Seminar/meeting/conference using audiovisual aids.
- Research paper writing: should be capable to write case-reports and research papers for publication in scientific journals.
- Team work: To develop Team spirit in patient management, working together in OPD, OT, ward and sharing responsibility with colleagues such as doctor, nurses and other staff .
- Teaching of Under-Graduate, Paramedical and other Staff of hospital / institutions.

PRACTICAL SKILLS

- History taking
- Anterior and posterior Rhinoscopy
- Oral cavity examination
- Otoscopy
- Neuro-Otology testing
- Indirect Laryngoscopy
- Tuning fork testing
- Audiometry, impedance Audiometry and Examination of Eustachian tube
- Functional examination of the nose
- Transillumination test
- Nasal endoscopy
- Examination of ear under microscope
- Neck Examination
- Examination of the cranial nerves
- Flexible fibro-optic laryngoscopy
- Examination of cervical, lymph nodes and Thyroid
- Others

MONITORING SKILLS

- Temperature recording
- Capillary blood sampling
- Arterial blood sampling
- Cardio respiratory monitoring
- Post operative monitoring and management
- Tracheostomy care

- Blood gas analysis
- Air way management
- Others

THERAPEUTIC SKILLS

- Tracheostomy & Airway management
- Anterior/ posterior nasal packing
- Ear Packing and Syringing
- Foreign body removal from ear, nose and throat
- Nasogastric feeding
- Endotracheal intubation
- Cardio pulmonary resuscitation
- Administration of oxygen
- Minipuncture and establishment of vascular access
- Administration of fluids, blood, blood components and parenteral nutrition
- Common dressing
- Abscess drainage
- Basic principles of Rehabilitation

Diagnostic skills

- Interpretation of X-rays/CT/MRI of Head, nose and paranasal sinuses, ear, neck & chest
- Understanding of Audiograms, ENG, BERA, ultrasonographic abnormalities and other diagnostic procedures

SURGICAL SKILLS

Basic surgical skills

- General layout and working of the OT
- Scrubbing, gowning and gloving
- Scrubbing sterilization of the OT instruments
- Shifting of patients
- Pre operative workup of the patient and surgical planning
- Understand rationale of surgery
- Postoperative care

Surgical Procedure to be assisted or Performed under Supervision

- Tracheostomy
- Tonsillectomy

- Adenoidectomy
- Myringotomy & Grommet insertion
- Nasal Polypectomy
- Sub-mandibular salivary gland excision
- Incision/drainage of quinsy/other abscesses
- S.M.R. & Septoplasty
- Cortical mastoidectomy
- Modified radical Mastoidectomy.
- Be able to manage common emergencies like, fracture of nasal bone, stridor requiring a tracheostomy, epistaxis, Mastoid abscess Peritonsillar abscess and others
- Myringoplasty/Tympanoplasty
- Nasal biopsy
- Biopsy from a neck mass, such as a node
- Direct Laryngoscopy & biopsy
- Nasopharyngoscopy & biopsy
- Flexible Bronchoscopy ,Oesophagoscopy – Foreign body removal & biopsy
- Aural polypectomy
- Endoscopy examinations
- Interanasal ethmoidectomy
- External ethmoidectomy
- External fronto ethmoidectomy
- Maxillectomy (Partial and Total)
- Excision of thyroglossal cyst
- Superficial Parotidectomy
- Radical block dissection of the neck for metastatic nodes.
- Total Laryngectomy for cancer
- Laryngofissure
- Repair of laryngotracheal trauma
- Ligation of external carotid artery
- Others

Procedure to observe:

- Facial nerve decompression
- Pinna-Repair (Post-traumatic)
- Surgery of choanal atresia,
- External canal atresia-surgery
- Functional endoscopic/sinus surgery
- Stapedectomy
- Rhinoplasty for cosmetic purposes
- Tympanoplasty with mastoid surgery

- Fibre-optic bronchoscopy and oesophagoscopy including foreign body removal
- Cryo/LASER surgery in ENT
- Microlaryngoscopic voice-surgery for vocal nodules, polyps/ cyst etc
- Phonosurgery for cord palsy including type I thyroplasty.
- Skull base/parapharyngeal space surgery
- Thyroid surgery,
- Laryngo-tracheal stenosis – surgical correction,
- Faciomaxillary injury etc.

Research methodology/Reporting on research

- Learns the basics in research methodology
- Problem oriented record keeping including use of computer
- Use of Medical literature search including through Internet and Library
- Attends bio-statistics classes by arrangement

Research Report

- Writing including preparation of Protocol for Research/Thesis.
- Writing an abstract/short paper/presentation style (Slide-making audiovisual aids).
- Preparation of a report on a Research project and Thesis.

Humanity/Ethics:

- Lectures on humanity including personality development, team spirit and ethical issues in patient care and human relationship including, public relations, by Psychologist and public relation officers are to be arranged by the deptt./college

TEACHING METHODS

The following learning methods may be used for the teaching of the DNB trainees

- Journal clubs
- Seminars
- Lecture/discussions: Lectures on newer topics by Faculty

- Case presentation in the ward and Special clinics (such as vertigo / otology and Tumor clinics) DNB Student will present a clinical case for discussion before a faculty and discussion made pertaining to its management and decision to be recorded in case files.
- Surgico-pathological Conference
- Combined Round/Grand Round
- Clinical teaching in OPD, Emergency, ICU, Operation Theatre and others
- Community camps: For rural exposure and also for experience in preventive aspect in Rural situation/hospital and school. Patient care camps are to be arranged during 2-3 years, involving Candidates/Faculty.
- Emergency situation: Casualty duty to be arranged by rotation among the Trainees with a Faculty cover daily by rotation.
- Special Clinics: DNB Student should attend special clinics like Vertigo clinic, Tumor Clinic/Head and neck cancer clinic, Rhinology clinic, otology clinics and others if available in the institute
- Death Reviews and Medical Audit
- It is recommended that the DNB trainee to be adequately exposed to Cadaveric dissection for learning surgical anatomy, different Surgical procedure, microscopic procedure, and endoscopic surgery
- Simulators dissection Lab: If the cadaveric dissection facility is not available then student should be exposed to Surgical Simulator labs

Note

- All sessions are to be attended by the faculty members. All trainees are supposed to attend the sessions except the ones posted in emergency.
- All the teaching sessions are assessed by the Faculty at the end of session and marks are given out of 10 and kept in the office for internal assessment.
- Attendance of the Trainees at various sessions has to be at least 75%.

DETAILS OF THE SKILLS TO BE ACQUIRED DURING THE TRAINING PERIOD

Clinical procedures which the candidates must know

Name of procedure	Number of procedure		
	As Observer	As First assistant	Under Supervision
Tracheostomy	5	5	5
Tonsillectomy	10	10	10
Adenoidectomy	10	10	10
Incision Drainage Quinsy/other abscesses	2	2	10
Biopsy from neck mass & Lymph node	2	2	10
Direct Laryngoscopy	2	2	20
Submandibular duct stone removal	1	1	1
Total Laryngectomy	2	-	-
Radical Neck dissection	2	-	-
Nasopharyngeal Angiofibroma	1	-	-
Ligation External Carotid Artery	2	1	-
Microlaryngeal Surgery	3	3	3
Parapharyngeal space surgery	2	1	-
Thyroid Surgery	2	1	-
Pre auricular sinus excision	2	2	2
Cortical Mastoidectomy/Modified radical mastoidectomy	5	5	5
Myringotomy	5	-	5
Aural Polypectomy	2	2	5
Branchial Sinus/Thyroglossal /cyst	2	2	2
Facial Nerve decompression	1	-	-
Stapedectomy	5	-	-
Myringoplasty/Tympanoplasty	5	5	10
Nasal Polypectomy	5	5	5
SMR/Septoplasty	5	5	10
External Frontoethmoidectomy	1	-	-
Functional Endoscopic Sims surgery	5	5	-
Maxillectomy	1	-	-
Rhinoplasty	10	10	-
Lobuloplasty	5	5	10

Fracture Nasal bone	5	5	5
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Investigations/tests which the candidates must know to interpret

Name of Investigations/tests
Pure tone audiometry and associated special tests
Impedance audiometry and Acoustic reflex
Caloric test
BERA / ASSR
Nerve Conduction Tests
Oto-acoustic emissions
ECG
Haematological Investigations including Haemogram, LFT, KFT, etc
Radiological – X-rays mastoid, PNS & neck CT Scans – Temporal bone, neck, DNS, MRI – Head & Neck Polysomnography

THESIS PROTOCOL & THESIS

The candidates are required to submit a thesis at the end of three years of training as per the rules and regulations of NBE.

Guidelines for Submission of Thesis Protocol & Thesis by candidates

Research shall form an integral part of the education programme of all candidates registered for DNB degrees of NBE. The Basic aim of requiring the candidates to write a thesis protocol & thesis/dissertation is to familiarize him/her with research methodology. The members of the faculty guiding the thesis/dissertation work for the candidate shall ensure that the subject matter selected for the thesis/dissertation is **feasible, economical** and **original**.

Guidelines for Thesis Protocol

The protocol for a research proposal (including thesis) is a study plan, designed to describe the background, research question, aim and objectives, and detailed methodology of the study. In other words, the protocol is the 'operating manual' to refer to while conducting a particular study.

The candidate should refer to the NBE Guidelines for preparation and submission of Thesis Protocol before the writing phase commences. The

minimum writing requirements are that the language should be clear, concise, precise and consistent without excessive adjectives or adverbs and long sentences. There should not be any redundancy in the presentation.

The development or preparation of the Thesis Protocol by the candidate will help her/him in understanding the ongoing activities in the proposed area of research. Further it helps in creating practical exposure to research and hence it bridges the connectivity between clinical practice and biomedical research. Such research exposure will be helpful in improving problem solving capacity, getting updated with ongoing research and implementing these findings in clinical practice.

Research Ethics: Ethical conduct during the conduct and publication of research is an essential requirement for all candidates and guides, with the primary responsibility of ensuring such conduct being on the thesis guide. Issues like Plagiarism, not maintaining the confidentiality of data, or any other distortion of the research process will be viewed seriously. The readers may refer to standard documents for the purpose.

The NBE reserves the right to check the submitted protocol for plagiarism, and will reject those having substantial duplication with published literature.

PROTOCOL REQUIREMENTS

1. All of the following will have to be entered in the online template. The thesis protocol should be restricted to the following word limits.
 - Title : 120 characters (with spacing) page
 - Synopsis [structured] : 250-300
 - Introduction : 300-500
 - Review of literature : 800-1000
 - Aim and Objectives : Up to 200
 - Material and Methods : 1200-1600
 - 10-25 References [ICMJE style]
2. It is mandatory to have ethics committee approval before initiation of the research work. The researcher should submit an appropriate application to the ethics committee in the prescribed format of the ethics committee concerned.

Guidelines for Thesis

1. The proposed study must be approved by the institutional ethics committee and the protocol of thesis should have been approved by NBE.
2. The thesis should be restricted to the size of 80 pages (maximum). This includes the text, figures, references, annexures, and certificates etc. It should be printed on both sides of the paper; and every page has to be numbered. Do not leave any page blank. To achieve this, following points may be kept in view:
 - a. The thesis should be typed in 1.5 space using Times New Roman/Arial/ Garamond size 12 font, 1" margins should be left on all four sides. Major sections viz., Introduction, Review of Literature, Aim & Objectives, Material and Methods, Results, Discussion, References, and Appendices should start from a new page. Study proforma (Case record form), informed consent form, and patient information sheet may be printed in single space.
 - b. Only contemporary and relevant literature may be reviewed. Restrict the introduction to 2 pages, Review of literature to 10-12 pages, and Discussion to 8-10 pages.
 - c. The techniques may not be described in detail unless any modification/innovations of the standard techniques are used and reference(s) may be given.
 - d. Illustrative material may be restricted. It should be printed on paper only. There is no need to paste photographs separately.
3. Since most of the difficulties faced by the residents relate to the work in clinical subject or clinically-oriented laboratory subjects, the following steps are suggested:
 - a. The number of cases should be such that adequate material, judged from the hospital attendance/records, will be available and the candidate will be able to collect case material within the period of data collection, i.e., around 6-12 months so that he/she is in a position to complete the work within the stipulated time.
 - b. The aim and objectives of the study should be well defined.
 - c. As far as possible, only clinical/laboratory data of investigations of patients or such other material easily accessible in the existing facilities should be used for the study.
 - d. Technical assistance, wherever necessary, may be provided by the department concerned. The resident of one specialty taking up some problem related to some other specialty should have some basic knowledge about the subject and he/she should be able to perform the investigations independently, wherever some specialized laboratory investigations are required a co-guide may be co-opted from the concerned investigative department, the

quantum of laboratory work to be carried out by the candidate should be decided by the guide & co-guide by mutual consultation.

4. The clinical residents are not ordinarily expected to undertake experimental work or clinical work involving new techniques, not hitherto perfected OR the use of chemicals or radioisotopes not readily available. They should; however, be free to enlarge the scope of their studies or undertake experimental work on their own initiative but all such studies should be feasible within the existing facilities.
5. The DNB residents should be able to freely use the surgical pathology/autopsy data if it is restricted to diagnosis only, if however, detailed historic data are required the resident will have to study the cases himself with the help of the guide/co-guide. The same will apply in case of clinical data.
6. Statistical methods used for analysis should be described specifically for each objective, and name of the statistical program used mentioned.

General Layout of a DNB Thesis:

- **Title-** A good title should be brief, clear, and focus on the central theme of the topic; it should avoid abbreviations. The Title should effectively summarize the proposed research and should contain the PICO elements.
- **Introduction-** It should be focused on the research question and should be directly relevant to the objectives of your study.
- **Review of Literature** - The Review should include a description of the most relevant and recent studies published on the subject.
- **Aim and Objectives** - The 'Aim' refers to what would be broadly achieved by this study or how this study would address a bigger question / issue. The 'Objectives' of the research stem from the research question formulated and should at least include participants, intervention, evaluation, design.
- **Material and Methods-** This section should include the following 10 elements: Study setting (area), Study duration; Study design (descriptive, case-control, cohort, diagnostic accuracy, experimental (randomized/non-randomized)); Study sample (inclusion/exclusion criteria, method of selection), Intervention, if any, Data collection, Outcome measures (primary and secondary), Sample size, Data management and Statistical analysis, and Ethical issues (Ethical clearance, Informed consent, trial registration).

- **Results-** Results should be organized in readily identifiable sections having correct analysis of data and presented in appropriate charts, tables, graphs and diagram etc.
- **Discussion**—It should start by summarizing the results for primary and secondary objectives in text form (without giving data). This should be followed by a comparison of your results on the outcome variables (both primary and secondary) with those of earlier research studies.
- **Summary and Conclusion-** This should be a précis of the findings of the thesis, arranged in four paragraphs: (a) background and objectives; (b) methods; (c) results; and (d) conclusions. The conclusions should strictly pertain to the findings of the thesis and not outside its domain.
- **References-** Relevant References should be cited in the text of the protocol (in superscripts).
- **Appendices** -The tools used for data collection such as questionnaire, interview schedules, observation checklists, informed consent form (ICF), and participant information sheet (PIS) should be attached as appendices. Do not attach the master chart.

Thesis Protocol Submission to NBE

1. DNB candidates are required to submit their thesis protocol within 90 days of their joining DNB training.
2. Enclosures to be submitted along with protocol submission form:
 - a) Form for Thesis Protocol Submission properly filled.
 - b) Thesis Protocol duly signed.
 - c) Approval letter of institutional Ethical committee. (*Mandatory, non receivable of any one is liable for rejection*)

Thesis Submission to NBE

1. As per NBE norms, writing a thesis is essential for all DNB candidates towards partial fulfillment of eligibility for award of DNB degree.
2. DNB candidates are required to submit the thesis before the cut-off date which shall be 30th June of the same year for candidates appearing for their scheduled December final theory examination. Similarly, candidates who are appearing in their scheduled June DNB final examination shall be required to submit their thesis by 31st December of preceding year.

3. Candidates who fail to submit their thesis by the prescribed cutoff date shall NOT be allowed to appear in DNB final examination.
4. Fee to be submitted for assessment (In INR): 3500/-
5. Fee can be deposited ONLY through pay-in-slip/challan at any of the Indian bank branch across India. The challan can be downloaded from NBE website www.natboard.edu.in
6. Thesis should be bound and the front cover page should be printed in the standard format. A bound thesis should be accompanied with:
 - a. A Synopsis of thesis.
 - b. Form for submission of thesis, duly completed
 - c. NBE copy of challan (in original) towards payment of fee as may be applicable.
 - d. Soft copy of thesis in a CD duly labeled.
 - e. Copy of letter of registration with NBE.
7. A declaration of thesis work being bonafide in nature and done by the candidate himself/herself at the institute of DNB training need to be submitted bound with thesis. It must be signed by the candidate himself/herself, the thesis guide and head of the institution, failing which thesis shall not be considered.

The detailed guidelines and forms for submission of Thesis

Protocol & Thesis are available at

www.natboard.edu.in.thesis.php

LOG BOOK

A candidate shall maintain a log book of operations (assisted / performed) during the training period, certified by the concerned post graduate teacher / Head of the department / senior consultant.

This log book shall be made available to the board of examiners for their perusal at the time of the final examination.

The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s)) The candidate will maintain the record of all academic activities undertaken by him/her in log book .

1. Personal profile of the candidate
2. Educational qualification/Professional data
3. Record of case histories
4. Procedures learnt
5. Record of case Demonstration/Presentations
6. Every candidate, at the time of practical examination, will be required to produce performance record (log book) containing details of the work done by him/her during the entire period of training as per requirements of the log book. It should be duly certified by the supervisor as work done by the candidate and countersigned by the administrative Head of the Institution.
7. In the absence of production of log book, the result will not be declared.

Leave Rules

1. DNB Trainees are entitled to leave during the course of DNB training as per the Leave Rules prescribed by NBE.
2. A DNB candidate can avail a maximum of 20 days of leave in a year excluding regular duty off/ Gazetted holidays as per hospital/institute calendar/policy.
3. MATERNITYLEAVE:
 - a. A female candidate is permitted a maternity leave of 90 days once during the entire duration of DNB course.
 - b. The expected date of delivery (EDD) should fall within the duration of maternity leave.
 - c. Extension of maternity leave is permissible only for genuine medical reasons and after prior approval of NBE. The supporting medical documents have to be certified by the Head of the Institute/hospital where the candidate is undergoing DNB training. NBE reserves its rights to take a final decision in such matters.
 - d. The training of the candidate shall be extended accordingly in case of any extension of maternity leave being granted to the candidate.
 - e. Candidate shall be paid stipend during the period of maternity leave. No stipend shall be paid for the period of extension of leave.
4. Male DNB candidates are entitled for paternity leave of maximum of one week during the entire period of DNB training.
5. No kind of study leave is permissible to DNB candidates. However, candidates may be allowed an academic leave as under across the entire duration of training program to attend the conferences/CMEs/Academic programs/Examination purposes.

DNB COURSE	NO. OF ACADEMIC LEAVE
DNB 3 years Course (Broad & Super Specialty)	14 Days
DNB 2 years Course (Post Diploma)	10 Days
DNB Direct 6 years Course	28 days

6. Under normal circumstances leave of one year should not be carried forward to the next year. However, in exceptional cases such as prolonged illness the leave across the DNB training program may be clubbed together with prior approval of NBE.
7. Any other leave which is beyond the above stated leave is not permissible and shall lead to extension/cancellation of DNB course.
8. Any extension of DNB training for more than 2 months beyond the scheduled completion date of training is permissible only under extraordinary circumstances with prior approval of NBE. Such extension is neither automatic nor shall be granted as a matter of routine. NBE shall consider such requests on merit provided the seat is not carried over and compromise with training of existing trainees in the Department.
9. Unauthorized absence from DNB training for more than 7 days may lead to cancellation of registration and discontinuation of the DNB training and rejoining shall not be permitted.

10. Medical Leave

- a. Leave on medical grounds is permissible only for genuine medical reasons and NBE should be informed by the concerned institute/hospital about the same immediately after the candidate proceeds on leave on medical grounds.
- b. The supporting medical documents have to be certified by the Head of the Institute/hospital where the candidate is undergoing DNB training and have to be sent to NBE.
- c. The medical treatment should be taken from the institute/ hospital where the candidate is undergoing DNB training. Any deviation from this shall be supported with valid grounds and documentation.
- d. In case of medical treatment being sought from some other institute/hospital, the medical documents have to be certified by the Head of the institute/hospital where the candidate is undergoing DNB training.

- e. NBE reserves its rights to verify the authenticity of the documents furnished by the candidate and the institute/hospital regarding Medical illness of the candidate and to take a final decision in such matters.

11.

- a. Total leave period which can be availed by DNB candidates is $120+28 = 148$ days for 6 years course, $60+14=74$ days for 3 years course and $40+10 = 50$ days for 2 years course. This includes all kinds of eligible leave including academic leave. Maternity / Paternity leave can be availed separately by eligible candidates. Any kind of leave including medical leave exceeding the aforementioned limit shall lead to extension of DNB training. It is clarified that prior approval of NBE is necessary for availing any such leave.
- b. The eligibility for DNB Final Examination shall be determined strictly in accordance with the criteria prescribed in the respective information bulletin.

EXAMINATION

FORMATIVE ASSESSMENT

Formative assessment includes various formal and informal assessment procedures by which evaluation of student's learning, comprehension, and academic progress is done by the teachers/ faculty to improve student attainment. Formative assessment test (FAT) is called as "Formative" as it informs the in process teaching and learning modifications. FAT is an integral part of the effective teaching. The goal of the FAT is to collect information which can be used to improve the student learning process.

Formative assessment is essentially positive in intent, directed towards promoting learning; it is therefore part of teaching. Validity and usefulness are paramount in formative assessment and should take precedence over concerns for reliability. The assessment scheme consists of Three Parts which has to be essentially completed by the candidates.

The scheme includes:-

Part I:- Conduction of theory examination

Part-II :- Feedback session on the theory performance

Part-III :- Work place based clinical assessment

Scheme of Formative assessment

PART – I	CONDUCT OF THEORY EXAMINATION	Candidate has to appear for Theory Exam and it will be held for One day.
PART – II	FEEDBACK SESSION ON THE THEORY PERFORMANCE	Candidate has to appear for his/her Theory Exam Assessment Workshop.
PART – III	WORK PLACE BASED CLINICAL ASSESSMENT	After Theory Examination, Candidate has to appear for Clinical Assessment.

The performance of the resident during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student

1. Personal attributes:

- **Behavior and Emotional Stability:** Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
- **Motivation and Initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.

- **Honesty and Integrity:** Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
- **Interpersonal Skills and Leadership Quality:** Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

- **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- **Diligence:** Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- **Clinical Performance:** Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. Academic Activity: Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

FINAL EXAMINATION

The summative assessment of competence will be done in the form of DNB Final Examination leading to the award of the degree of Diplomate of National Board in ENT. The DNB final is a two-stage examination comprising the theory and practical part. An eligible candidate who has qualified the theory exam is permitted to appear in the practical examination.

Theory Examination

1. The theory examination comprises of **Three/ Four** papers, maximum marks 100 each.
2. There are 10 short notes of 10 marks each, in each of the papers. The number of short notes and their respective marks weightage may vary in some subjects/some papers.
3. Maximum time permitted is 3 hours.
4. Candidate must score at least 50% in the aggregate of **Three/ Four** papers to qualify the theory examination.

5. Candidates who have qualified the theory examination are permitted to take up the practical examination.
6. The paper wise distribution of the Theory Examination shall be as follows:

Paper I

- Basic Sciences related to ear including audiology
- Research Methodology
- Diseases of Ear

Paper II

- Basic sciences related to nose, paranasal sinuses, skull base, oral cavity & salivary glands
- Diseases of nose and paranasal sinuses and skull bases
- Diseases of oral cavity and salivary glands

Paper III

- Basic Sciences related to Pharynx, Larynx, Trachea, Bronchus and Esophagus
- Diseases of Pharynx
- Diseases of Larynx, Trachea and Bronchus
- Diseases of Esophagus

Paper IV

- General Principles of Surgery
- Neck Masses
- Clinical methods in ENT
- Recent Advances and Investigations

a) Practical Examination:

1. Maximum Marks: 300.
2. Comprises of Clinical Examination and Viva.
3. Candidate must obtain a minimum of 50% marks in the Clinical Examination (including Viva) to qualify for the Practical Examination.
4. There are a maximum of three attempts that can be availed by a candidate for Practical Examination.
5. First attempt is the practical examination following immediately after the declaration of theory results.
6. Second and Third attempt in practical examination shall be permitted out of the next three sessions of practical examinations placed alongwith the

- next three successive theory examination sessions; after payment of full examination fees as may be prescribed by NBE.
7. Absentation from Practical Examination is counted as an attempt.
 8. Appearance in first practical examination is compulsory;
 9. Requests for Change in center of examination are not entertained, as the same is not permissible.
 10. Candidates are required not to canvass with NBE for above.

Declaration of DNB Final Results

1. DNB final is a qualifying examination.
2. Results of DNB final examinations (theory & practical) are declared as PASS/FAIL.
3. DNB degree is awarded to a DNB trainee in the convocation of NBE.

RECOMMENDED TEXT BOOKS AND JOURNALS

Books Recommended

- Logan Turner Diseases of Ear Nose Throat
- Otolaryngology, Otology & Neurotology by Paprella & Micheal
- Essentials of endoscopic sinus surgery by S Stamberger
- Color Atlas of Head & Neck Surgery by Jatin P Shah
- Scott Brown's Diseases of Ear Nose and Throat
- Surgery of the Ear – Glasscock and Shambaugh
- Otolaryngology, Head and Neck by Cummings
- Audiology by Katz
- Head and Neck Surgery by P M Stell and Maran
- Basic & Advances Biostatistics - Manju Pandey
- Oxford Handbook of Medical Biostatistics

List of Journals

- Indian Journal of Otolaryngology and Head Neck Surgery
- Asian Journal of Ear Nose and Throat
- Ear, Nose and Throat Journal
- Indian Journal of Otology
- Journal of Laryngology and Otology
- Otolaryngologic clinics of North America
- Int. J. of Pediatric Otolaryngology
- Laryngoscope
- Annals of Otolaryngology
- Otolaryngology Head Neck Surgery
- Archives of Otolaryngology
