

GOPAL NARAYAN SINGH UNIVERSITY
JAMUHAR, SASARAM, ROHTAS-821305



NARAYAN MEDICAL COLLEGE & HOSPITAL

**GUIDELINES FOR COMPETENCY BASED
POSTGRADUATE TRAINING PROGRAMME FOR
MS IN
OTORHINOLARYGOLOGY**

PREAMBLE:

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training. The purpose of MS ENT is to standardize Otorhinolaryngology teaching at Post Graduate level throughout the country so that it will benefit in achieving uniformity in undergraduate teaching as well and resultantly creating competent ENT Surgeons with appropriate expertise.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

SUBJECT SPECIFIC LEARNING OBJECTIVES

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

1. Practice his specialty ethically keeping in mind the requirement of the patient, community and people at large.
2. Demonstrate sufficient understanding of basic sciences related to his specialty and be able to integrate such knowledge in his Clinical practice.
3. Diagnose and manage majority of conditions in his specialty (clinically and with the help of relevant investigations)
4. Plan and advise measures for the promotive, preventive, curative and rehabilitative aspects of health and diseases in the specialty of ENT.
5. Should be able to demonstrate his cognitive skills in the field of ENT and its ancillary branches during the formative and summative evaluation processes.
6. Play the assigned role in the implementation of National Health Programs
7. Demonstrate competence in basic concepts of research methodology and writing thesis and research papers.
8. Develop good learning, communication and teaching skills.
9. Demonstrate sufficient understanding of basic sciences and the clinical applications related to the specialty to be able to integrate this knowledge into Clinical practice. Acquire in-depth knowledge in the subject including recent advances.
10. Demonstrate that he is fully conversant with the latest diagnostics & therapeutics available.

SUBJECT SPECIFIC LEARNING OBJECTIVES

1. THEORETICAL KNOWLEDGE:

A student should have fair knowledge of basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology) as applied to ENT and be able to integrate such knowledge in his clinical practice. She / He should acquire in-depth knowledge of his subject including recent advances. She / He should be fully conversant with the bedside procedures (diagnostic and therapeutic) and having knowledge of latest diagnostics and therapeutics available.

2. CLINICAL / PRACTICAL SKILLS:

A student should be adept at good history taking, physical examination, providing basic life support and advanced cardiac life support, common procedures like FNAC, Biopsy, aspiration from serous cavities, lumbar puncture etc. She/he should be able to choose the required investigations to enhance the attitude, communication skills, including dealing with patient's relatives with the required empathy, adapt to changing trends in education, learning methods and evolving new diagnostic and therapeutic techniques in the subject of ENT.

3. RESEARCH:

She/ He should know the basic concepts of research methodology, plan a research project, plan and write a thesis and should know how to use library facilities. Basic knowledge of statistics is also required. Knowledge about use of internet resources is required.

4. TEACHING:

The student should learn the basic methodology of teaching and assessment and develop competence in teaching medical/paramedical students and their assessment.

SUBJECT SPECIFIC COMPETENCIES

A. COGNITIVE DOMAIN

At the end of training, the student should be able to demonstrate ability to practically apply knowledge gained during training period. This would include the following:

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.

PRINCIPLES AND PRACTICES OF OTOLARYNGOLOGY, AUDIOLOGY AND SPEECH ATHOLOGY

- 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, tracheobronchialtree and their causative organisms.
 - ❖ Indications and various techniques of direct laryngoscopy, nasalendoscopy. 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.

RECENT ADVANCES IN OTOLARYNGOLOGY AND HEAD NECK SURGERY

- Recent developments in the diagnosis, pathogenesis and treatment of the ENTdiseases
- The knowledge of the frontiers of the oto-laryngology and lateral skull basesurgery
- 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

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

B. AFFECTIVE DOMAIN

1. The student will show integrity, accountability, respect, compassion and dedicated patient care. The student will demonstrate a commitment to excellence and continuous professional development.
2. The student should demonstrate a commitment to ethical principles relating to providing patient care, confidentiality of patient information and informed consent.
3. The student should show sensitivity and responsiveness to patients' culture, age, gender and disabilities.
4. The student should be able to choose the required investigations to enhance the attitude, communicative skills, including dealing with patient's relatives with the required empathy, adapt to changing trends in education, learning methods and evolving new diagnostic and therapeutic techniques in the subject of ENT.

C. PSYCHOMOTOR DOMAIN

By the end of the training, a student should be able to demonstrate his skills in:

- Taking a good history and demonstrating good examination techniques.
- arrive at a logical working diagnosis, differential diagnosis after clinical examination and order appropriate investigations keeping in mind their relevance (need based) and thereby provide appropriate care that is ethical, compassionate, responsive and cost effective and in conformation with statutory rules.
- Should be able to perform and demonstrate the practical skills in the field of ENT including the following:
 - ❖ Examination of the ear, nose and throat oral cavity examination
 - ❖ Clinico-physiological examination and evaluation of the audio-vestibulo neurological system
 - ❖ Examination of the larynx and the throat including flexible endoscopy, stroboscopy, voice analysis and the clinico-physiological examination of the speech
 - ❖ Examination of the otological and audiological system including Tuning fork testing, audiological evaluation, micro and otoendoscopy
 - ❖ Clinical and physiological evaluation of the nose and paranasal sinuses including nasal endoscopy and olfactory evaluation
 - ❖ Examination of the neck and its structures
- Should demonstrate and perform various therapeutic skills related to the speciality such as :
 - ❖ Tracheostomy
 - ❖ Anterior/ posterior nasal packing

- ❖ Ear Packing and Syringing
- ❖ Foreign body removal from air nose and throat
- ❖ Airway management including basic life support skills, Cardiopulmonary resuscitation, intubation, homeostasis maintenance, IV alimentation and fluid, electrolyte maintenance and principles of blood transfusion and alimentation including Nasogastric feeding, gastrostomy
- ❖ Wound suturing, dressings and care of the wounds
- ❖ Basic principles of rehabilitation
- ❖ Common procedures like FNAC, biopsy, aspiration from serous cavities, lumbar puncture etc.
- Should understand principles of and interpret X-rays/CT/MRI, audiograms, ENG, BERA, OAE, ultrasonographic abnormalities and other diagnostic procedures in relation to the specialty
- Should have observed/performed under supervision the various surgical procedures in relation to the specialty

SYLLABUS

COURSE CONTENTS:

1. Anatomy and Physiology of Ear, Nose and Throat, Trachea and esophagus.
2. The generation and reception of speech
3. Radiographic anatomy of the ear, nose, throat and imaging.
4. Bacteriology in relation to Otorhinolaryngology
5. Allergy and rhinitis
6. Haematology in relation to Otolaryngology
7. Anaesthesia for Otolaryngology
8. Pharmacology of drugs used in ENT
9. Electrolyte, fluid balance/shock conditions
10. Use of teaching aids
11. Routine blood, urine testing
12. Preparation of slides
13. Facial nerve stimulation test
14. Audiometric tests like pure tone Audiometry, Impedance Audiometry, Free field Audiometry, Specialized tests of hearing including SISI, Tone decay, ABLB, Speech discrimination score etc.
15. Vestibular tests like caloric testing (Water and Air) stopping test, Fukuda's test,
16. Evoked response audiometry.

Ear:

1. The physical and functional examination of the ear
2. The functional and physical examination of the vestibular system.
3. Tinnitus
4. Affections of external ear
5. Repair of deformities of the external ear.
6. Congenital conditions of the middle ear cleft
7. Traumatic conductive deafness
8. Acute inflammation of the middle ear cleft
9. Non-suppurative otitis media
10. Chronic suppurative otitis media
11. Management of chronic suppurative otitis media
12. Complications of infections of middle ear.
13. Tumors of the middle ear cleft and temporal bone
14. Diseases of the otic capsule-otosclerosis
15. Diseases of the otic capsule-other diseases
16. The deaf child
17. Acoustic neuroma
18. Ototoxicity
19. Presbycusis
20. Diagnosis and management of sudden and fluctuant sensorineural hearing loss
21. Meniere's disease
22. Neurologic aspects of vertigo
23. Facial paralysis
24. Rehabilitation of adults with acquired Hearing loss-Hearing aids
25. The cochlear Implants
26. Nystagmus
27. Otoacoustic emissions

Nose:

1. Examination of the nose
2. Conditions of the external nose
3. Injuries of the facial skeleton
4. Congenital diseases of the nose
5. The nasal septum
6. Foreign bodies in the nose, rhinolith
7. Epistaxis
8. Acute chronic inflammations of the nasal cavities
9. Vasomotor rhinitis-allergic and non-allergic
10. Nasal polyposis
11. Abnormalities of smell
12. Acute sinusitis
13. Chronic sinusitis
14. Nasal Allergy/Fungal allergic sinusitis
15. Complications of acute and chronic sinusitis
16. Tumors of nose and sinuses
17. Facial pains
18. Trans-ethmoidal hypophysectomy
19. Functional endoscopic sinus surgery (FESS)

Throat:

1. Methods of examination of the mouth and pharynx
2. Diseases of the mouth
3. Diseases of the salivary glands
4. Pharyngeal lesions associated with general diseases
5. Diseases of the tonsils and adenoids (excluding neoplasms)
6. Tumors of the pharynx
7. Hypopharyngeal diverticulum (Pharyngeal Pouch)
8. Methods of examining and larynx and tracheobronchial tree
9. Congenital diseases of the larynx
10. Laryngeal disorders in singers and other voice users
11. Neurological affections of larynx and pharynx
12. Intubation of the larynx, laryngotomy and tracheostomy
13. Cervical node dissection
14. Skin grafts in Otolaryngology and reconstructive methods including regional and distant flaps for repair of defects after excision of tumors or trauma.
15. Micro laryngeal surgery/thyroplasty

Miscellaneous and head and neck:

1. Cranial nerves
2. Raised intracranial tension-causes, diagnosis, management with particular reference to otitis hydrocephalus
3. Head injuries and I.C. Haemorrhage
4. Pituitary gland, anatomy, physiology hypo - and hyper - pituitarism, new growths.
5. Intracranial venous sinuses and their affections
5. Osteology: skull, mandible cervical and thoracic vertebral sternum
6. Cervical fascia, facial spaces in neck, retro-pharyngeal and parapharyngeal Abscesses

7. Anatomy and physiology of thyroid gland, goitre, diseases of the thyroid and carcinoma of thyroid
8. Large blood vessels in neck, thoracic duct development of major cervical and thoracic blood vessels.
9. Head and neck reconstructive surgery

Drugs used in ENT:

1. Antibiotics Antihistaminic
2. Nasal vasoconstrictors
3. Local anaesthetics
4. Corticosteroids
5. Cyto-toxic agents
6. Antibiotics
7. Radioactive isotopes
8. Antifungal agents
9. Vasopressive and other agents used in shock like states.

General:

1. 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
2. Agents used in shock like states

Desirable

1. The ears and nasal sinuses in the aerospace environment
2. Physiological consideration of pressure effects on the ear and sinuses in deepwater diving
3. The principles of cancer immunology with particular reference to head and neck cancer
4. Principles of chemotherapy in head and neck cancer
5. Recording of nystagmus by ENG and its interpretation

Ear:

1. Traumatic lesions of the inner ear
2. Inflammatory lesions of the vestibular and auditory nerve
3. Vascular lesions of the inner ear
4. Electronystagmography
5. Skull base/Neurologic surgery

Nose:

1. Cosmetic surgery of the nose
2. Non-healing granuloma of the nose
3. Surgery of the pterygopalatine fossa
4. LASER Surgery

Throat:

1. Oesophageal conditions in the practice of ear, nose and throat surgery
2. Disorders of speech
3. Lower respiratory conditions in Otolaryngology

Miscellaneous and head and neck

1. Functional Anatomy of cerebellum and brainstem
2. Anatomy of mediastinum
3. Pleura, plural cavity, broncho-pulmonary segments and their clinical importance
4. Facial plastic surgery

TEACHING AND LEARNING METHODS

TEACHING METHODOLOGY

- **Didactic lectures are of least importance; small group discussion such as seminars, journal clubs, symposia, reviews and guest lecturers should get priority for theoretical knowledge.**

Bedside teaching, grand rounds, structured interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning with appropriate emphasis on e-learning.

- **Student should have hand-on training in performing various procedures and ability to interpret various tests/investigations.**

Exposure to newer specialized diagnostic/therapeutic procedures concerning her/his subject should be given. Self-learning tools like assignments and case-based learning may be promoted. Exposure to newer specialized diagnostic/therapeutic procedures concerning ENT should be given.

1. Rotations:

- A major portion of posting should be in ENT Department. It should include in-patients, out-patients, ICU, trauma, emergency room, specialtyclinics including Vertigo Clinic, Rhinology Clinic, Otology Clinic, CancerClinic, Cadaveric dissection Lab, Audiology and speech therapy.
- Inter-unit rotation in the department should be done for a period of up to one year.
- Rotation in appropriate related subspecialties for a total period not exceeding 06 months.

2. Clinical meetings:

- There should be intra- and inter- departmental meetings for discussing the uncommon/interesting cases involving multiple departments.

3. Log book:

- Each student must be asked to present a specified number of cases for clinical discussion, perform procedures/tests/operations/present seminars/review articles from various journals in inter-unit/interdepartmental teaching sessions. They should be entered in a Log Book. The Log books shall be checked and assessed periodically by the faculty members imparting the training.

4. Thesis writing and research:

- Thesis writing is compulsory.
5. The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
 6. A postgraduate student of a postgraduate degree course in broad specialities /superspecialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
 7. The student should know the basic concepts of research methodology, plan a research project, be able to retrieve information from the library. The student should have a basic knowledge of statistics.
 8. Department should encourage e-learning activities.

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of surgical skills laboratories in the medical colleges is mandatory.

ASSESSMENT

Assessment should be comprehensive & objective. It should address the stated competencies of the course. The assessment needs to be spread over the duration of the course.

FORMATIVE ASSESSMENT, i.e., assessment during the training would include:

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self directed learning and ability to practice in the system.

The formative assessment is continuous as well as end-of-term. The former is to be based on the feedback from the senior residents and the consultants concerned. **End-of-term assessment is held at the end of each semester (upto the 5th semester).** Formative assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.

GENERAL PRINCIPLES

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills. **The Internal Assessment should be conducted in theory and clinical examination.**

INTERNAL ASSESSMENT

The performance of the Postgraduate student 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. Marks should be allotted out of 100 as followed.

1	Personal Attributes	20
2	Clinical Work	20
3	Academic activities	20
4	End of term theory examination	20
5	End of term practical examination	20

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, and 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.

4. End of term theory examination

Conducted at end of 1st, 2nd year and after 2years 9 months

5. End of term practical/oral examinations

After 2 years 9 months. Marks for **personal attributes** and **clinical work** should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20. Marks for **academic activity** should be given by the all consultants who have attended the session presented by the resident. The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

Quarterly assessment during the MS training should be based on following educational activities:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form (**Annexure I**).

SUMMATIVE ASSESSMENT ie., at the end of the training

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

- Ratio of marks in theory and practical's will be equal.
- The pass percentage will be 50%.
- Candidate will have to pass theory and practical examinations separately

THE EXAMINATION WILL BE IN THREE PARTS:

1. Thesis

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature. Thesis shall be submitted at least six months before the Theory and Clinical /Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination. A candidate shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

2. Theory

The examinations shall be organised on the basis of 'Grading' or 'Marking system' to evaluate and to certify candidate's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately shall be mandatory for passing examination as a whole. The examination for MS shall be held at the end of 3rd academic year. An academic term shall mean six month's training period. Theory shall consist of four papers of 3 hours each.

- Paper I** : Basic Sciences related Otolaryngology
- Paper II** : Principles and Practices of Otolaryngology
- Paper III** : Recent advances in Otolaryngology and Head Neck surgery.
- Paper IV** : General Surgical Principles and Head-Neck Surgery.

3. Clinical / Practical and viva voce Examination

Clinical examination shall be conducted to test the knowledge, skills, attitude and competence of the post graduate students for undertaking independent work as a specialist/teacher, for which post graduate students shall examine a minimum one long case and two short cases. The Oral examination shall be thorough and shall aim at assessing the post graduate student's knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the specialty, which form a part of the examination. **Assessment may include Objective Structured Clinical Examination(OSCE).Oral/Viva-voce examination needs to assess knowledge on X-rays, instrumentation, operative procedures. Due weightage should be given to Log Book Records and day-to-day observation during the training.**

THEORY EXAMINATION (TOTAL= 400)

Paper	Title	Pattern of question	Marks
Paper 1	Basic Sciences related Otolaryngology	10 question each will carry equal 10 marks	100
Paper 2	Principles and Practices of Otolaryngology	10 question each will carry equal 10 marks	100
Paper 3	Recent advances in Otolaryngology and Head Neck surgery	10 question each will carry equal 10 marks	100
Paper 4	General Surgical Principles and Head-Neck Surgery	10 question each will carry equal 10 marks	100

PRACTICAL EXAMINATION AND VIVA VOCE (TOTAL=400)

S.NO	CASE	MARKS
1	LONG CASE = ONE X 150	150
2	SHORT CASE = TWO X 75	150
3	VIVA VOCE Viva (10 each with 4 examiners). = 40 Instruments. = 20 Specimens = 10 Bones (Temporal bone, Skull) = 10 Investigations(CT, MRI, Audiogram, BERA, Impedance, ENG, X-Ray (according to the facilities available in the department). = 10 log book records = 10	100

JOB RESPONSIBILITIES

During **first year** the resident will work under direct supervision of the 2nd/3rd year resident/senior resident and consultant on call. He/ She will be responsible for taking detailed history, examination of patients as per the file record and send appropriate investigations as advised by seniors. Initially all procedures are to be observed and then done under supervision of seniors and during 2nd/3rd year can do procedures independently. **In 2nd year**, resident is posted in specialty clinics and is also responsible for making of discharge cards including referrals. **In 3rd year**, the resident is encouraged to make independent decisions in management of cases. He/ She is also involved in teaching of undergraduate students in OPDs.

The **first year resident** observes the general layout and working of the OT, understands the importance of maintaining sanctity of the OT, scrubbing, working and sterilization of all the OT instruments, know-how of endoscopes, microscopes and laryngoscopes. He/ She is responsible for shifting of OT patients, for participating in the surgery as second assistant and for post op management of the patient in recovery and in ward. **The second year** resident is responsible for the pre-op workup of the patient, surgical planning and understanding the rationale of surgery. He/ She is the first assistant in surgery and is responsible for anticipating intra-op and post-op complications and managing them. **The final year** resident should be able to perform minor/medium surgeries independently and assist in medium and major/extra major surgeries. He/She should be able to handle all emergencies and post operative complications independently and is responsible for supervision and guidance of his/her juniors.

RECOMMENDED READING:

Books (latest edition)

- Scott-Brown's *Otorhinolaryngology and Head and Neck Surgery*
- Cummings *Otolaryngology - Head and Neck Surgery*
- *Otolaryngology, Otology & Neurotology* by Paparella & Micheal
- Glasscock-Shambaugh's *Surgery of the Ear*
- *Essentials of Functional Sinus Surgery* by Heinz Stammberger MD
- *Color Atlas of Head & Neck Surgery* by Jatin P Shah
- *Handbook of Clinical Audiology* by Jack Katz
- Stell & Maran's *Textbook of Head and Neck Surgery and Oncology*

Journals

- 03-05 international Journals and 02 national (all indexed) journals

ANNEXURE I

Postgraduate Students Appraisal Form

Pre / Para /Clinical Disciplines

Name of the Department/Unit : _____

Name of the PG Student : _____

Period of Training : _____ FROM.....TO.....

Sr. No.	PARTICULARS	Not Satisfactory	Satisfactory	More Than Satisfactory	Remarks
1	Journal based / recent advances learning	1 2 3	4 5 6	7 8 9	
2	Patient based /Laboratory or Skill based learning				
3	Self directed learning and teaching				
4	Departmental and interdepartmental learning activity				
5	External and Outreach Activities / CMEs				
6	Thesis / Research work				
7	Log Book Maintenance				

Publications : **Yes/ No**

Remarks* _____

***REMARKS:**

- Any significant positive or negative attributes of a postgraduate student to be mentioned.
- For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

.....
SIGNATURE OF ASSESSEE

.....
SIGNATURE OF CONSULTANT

.....
SIGNATURE OF HOD

TEACHING PROGRAM

GENERAL PRINCIPLES

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented. Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

TEACHING SESSIONS

- Bedside Teaching Round
- Seminar
- Journal Club
- Case discussion

TEACHING SCHEDULE

Suggested departmental teaching schedule is as follows:

Journal club/Seminar	Once a week
Speciality clinic (Vertigo / head neck cancer).	Once a week
Thesis meeting.	Once a week
Seminar/Case Presentation.	Once a week
Seminar/Case Presentation.	Once a week
Central session	Once a week

Note:

- All sessions are to be attended by the faculty members. All PGs are supposed to attend the sessions except the ones posted in emergency.
- All the teaching sessions are assessed by the consultants at the end of session and marks are given out of 10 and kept in the office for internal assessment.

SENT UP CRITERIA

- The performance of the Postgraduate student 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. Marks should be allotted out of 100 as followed.

Sr. No.	Items	Marks
1	Personal Attributes	20
2	Clinical Work	20
3	Academic activities	20
4	End of term theory examination	20
5	End of term practical examination	20

MINIMUM OF 75 MARKS WILL BE CUMPULSORY

- Post graduate students **appraisal form (annexure-1)** duly signed by HOD Of Department



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(A UNIT OF DEO MANGAL MEMORIAL TRUST)