

CENTRAL COUNCIL OF INDIAN MEDICINE
NEW DELHI

SYLLABUS OF
MAHIR-E-JARAHAT UZN, ANF WA HALAQ
(M.S. E.N.T.)

(MASTER OF SURGERY-E.N.T.)

3 YEARS DEGREE COURSE



SYLLABUS OF
MAHIR-E- JARAHAT UZN, ANF WA HALAQ
(M.S. E.N.T.)

INDEX

S. No.	Topic	Page No.
Preliminary Examination		
1.	Paper I – Research Methodology and Biostatistics	3-6
2.	Paper II – Tashreeh wa Munafeul Aza Uzn, Anf wa Halaq	7-8
3.	Paper III – Principles and Practices of Otorhinolaryngology & Unani Therapies used in Amraz-e-Uzn-Anf-wa-Halaq	9-10
Final Examination		
4.	Paper I– Jadeed Tahqeeqat in Amraz-e-Uzn, Anf wa Halaq	11
5.	Paper II– Medical and Surgical Management of Amraz-E-Uzn, Anf wa Halaq	12-13
6.	Paper III– Amaliyat-e-Jarahiya in Uzn, Anf-wa-Halaq	14-15
7.	Recommended list of Text Books and Journals	16-17

Preliminary Examination

Paper-I

Part–A

Research Methodology and Biostatistics

Time: 3 hours

Maximum Mark: 100
Minimum passing Mark: 50

Research Methodology

1. Types of research

- a) Literary research
- b) Clinical research
- c) Experimental research
- d) Observation and field studies

2. Trends and possibilities of R&D of Unani Drugs

3. Research problems

- a) Definition
- b) Selection and sources of research problems

4. Hypothesis

Types: Null and alternate hypothesis

5. Research designs

Types of Research designs

6. Controls in research designs

- a) Selection criteria
- b) Placebo and plain control
- c) Randomization
- d) Balancing and matching

7. Factors effecting research results

8. Tools and techniques in research

- a) Interview, questionnaire, inventories, scales
- b) Rating scales

9. Computer programmes used in research

- a) Minitab
- b) SPSS

10. Protocols for research and report writing

- a) Protocols for experimental, clinical and community based research.
- b) Writing research report.
- c) References in research report.
 - Books
 - Journals
 - Compendia
 - Bulletins
 - WHO Reports
 - Internet Sites

11. Guidelines for Research

- a) WHO
- b) ICMR
- c) CPCSEA

Part - B

Bio-Statistics

Scope and utility of Biostatistics

1. Descriptive Statistics:-

a) Analysis of Data:

- Data collection, tabulation and presentation of data.
- Measure of central tendency – Mean, Median and Mode
- Measures of dispersion: Range, quartile deviation, standard deviation

b) Probability:

- Definition and laws of probability
- Types of probability distribution
- NPC and its application size
- Randomized samples

c) Sampling:

- Types and sample size
- Randomized sampling

2. Inferential Statistics:-

a) Correlation and linear regression:

- Karl Pearson correlation coefficient
- Linear regression equations

b) Test of significance:

- 't' test
- 'z' test

c) Test of variance:

- ANOVA one way
- ANOVA two way
- X^2

d) Non-parametric tests:

- Median test, Mann-Whitney U test.
- Kruskal-Wallis test, Fried test

3. Vital Statistics:-

- a) Rate and Ratios
- b) Standardization of population
- c) Risk factors

Preliminary Examination

Paper-II

Part A

Tashreeh wa Munafeul Aza Uzn, Anf wa Halaq **(Anatomy & Physiology Related to Otorhinolaryngology)**

Time: 3 Hours

Maximum Mark: 100
Minimum Passing Marks: 50

Tashreeh (Anatomy):-

- **Tashreeh wa Namoo (Anatomy Embryology of the Human Ear)**
- **Eustachian Tube Anatomy and Physiology**
- **Cranial Nerves Related to ENT**
- **Temporal Bone**

1. Anaf (Nose and Paranasal Sinuses)

- a) Tashreeh wa Namoo - Anatomy and Embryology.
- b) Nasal Septum

2. Oral Cavity

- a) Anatomy of mouth and related faciomaxillary structure
- b) Anatomy and Physiology of salivary glands

3. Halaq

- a) Tashreeh wa Namoo-Anatomy, Embryogenesis and Physiology of Pharynx
- b) Anatomy and Embryogenesis of Esophagus and its relations

4. Hanjra (Larynx and Tracheobronchial Tree)

- a) Tashreeh wa Namoo - Anatomy and embryology
- b) Physiology of respiration
- c) Physiology of phonation

5. Skull Base

- a) Surgical Anatomy
- b) Clinical Neuroanatomy

6. Neck

- a) Facial spaces of head and neck
- b) Lymph nodes of head and neck
- c) Thyroid gland

Applied anatomy of the skull bones, accessory sinuses, external, middle and inner ears, nose, PNS, nasopharynx, meninges, brain, pharynx, larynx, Pterygo –palatine fossa trachea and bronchi, lungs, pleurae oesophagus and the mediastinum.

Ithlaqi Munafeul Aza
(Applied Physiology)

Sama’at Usool (Physiology and Principle of hearing)

Sama’at ka Muayina (Assessment of hearing.)

Waqar, Summun (Hearing loss.)

Physiology of equilibrium and its application to the dizzy patient.

Assessment of vestibular function

1. Ilm-E-Sama’at (Audiology):

- a) Audiometry and Masking.
- b) Tympanometry
- c) Pathophysiology of the ears and nasal sinuses in flight and diving.
- d) Evaluation of the nasal airway (Rhino Manometry)
- e) Mechanism of perception of smell and taste, mechanism of breathing and voice production, Lacrimation, deglutition and salivation. Functional tests of the nose and Para nasal sinuses, Mechanism of cough and sneezing.
- f) Physics of sound, theories of hearing, mechanism of perception of sound and speech Production, Physiology of equilibrium & Cerebral function.
- g) Physiology of brain in connection with hearing, speech, smell and phonation.
- h) Audiologic tests like Audiometry, impedance, evoked potentials, Otoacoustic emission (OAE), Speech Audiometry Physiology of larynx, Tracheobronchial tree & oesophagus - Histology of mucous membranes, internal ear and other associated organs and structures, nose, Para Nasal Sinus, Nasopharynx, Larynx, Tracheobronchial Tree, Lympho Epithelial system.
- i) Parapharyngeal spaces in the neck including connective tissue barriers of larynx.

Preliminary Examination

Paper III

Principles and Practices of Otorhinolaryngology & Unani Therapies used in Amraz-e-Uzn-Anf-wa-Halaq

Time: 3 hours

Maximum Mark: 100

Minimum passing Mark: 50

1. Unani Diagnostic tools used in Amraz-e- Uzn, Anf wa Halaq.
2. Clinical methodology as applied to Amraz-e- Uzn, Anf wa Halaq in adult & children and the accessory sinuses.
3. Prevention and treatment, infectious diseases of Otorhinolaryngology and Head & Neck region.
4. Circulatory and nervous disturbances of the nose, throat and ear and their effects on other organs of the body.
5. Deformities, injuries sinus infections, polyps and the tumours of the nose, and paranasal sinuses.
6. Examination of the ear, deafness and allied diseases, complications of diseases of the ear. Injuries, tumours, 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 vibrotactile aids.
7. Surgical pathology of Otorhinolaryngology and Head Neck region.
8. Basic knowledge of the anaesthesia as related to ENT.
9. Examination of diseases of children in connection with throat and larynx. Neurological and vascular disturbances. Congenital and neonatal stridor.
10. Pathology of various diseases of the larynx and throat, tracheo bronchial tree and their causative organisms.
11. Indications and various techniques of direct laryngoscopy, nasal endoscopy, bronchoscopy and oesophagoscopy, including microlaryngoscopic procedures.
12. Reading of radiograms, scans, audiograms, nystagmograms and tympanograms in connection with ENT diseases/ disorders.
13. Special apparatus for the diagnosis and treatment of the diseases of ear, nose and throat including audiometer, Brainstem Evoked Response Audiometry (BERA), Electronystagmography (ENG), Speech analyser etc.
14. Brief history of Unani related to Amraz-e- Uzn Anf wa Halaq
15. Role of Ilaj bit Tadbir in Amraz –e – Uzn Anf wa Halaq

(Hijama, Fasad, Nutool, Shamoom, Utoos, Bakhoor, Qai, Qutoor, Hamam, Riyazat, Amal –e-Kaee, Irsal-e- Alaq, Huqna, Dalak, Muarriq, Muzmaza, Gharghara, Zaroor, Inkebaab, Nafookh, etc.)

Amraz-e-Uzn, Anf-wa-Halaq me istemal hone wali Advia ka tafseeli mutala'
(Detail knowledge of drugs used in the treatment of ENT disorders)

1. Unani Advia (Mufradat wa Murakkabat)
2. Daafae'Jaraseem/ Daafae' Vairusi / Daafae' Taaffun advia (Antibiotics / Antiviral / Antifungal/Antiseptic etc.)
3. Musakkin (Analgesic), Mukhaddir (Anaesthetic) Daafae' hassasiyat (Antihistaminic)

Final Examination

Paper- I

Jadeed Tahqeeqat in Amraz-e-Uzn, Anf wa Halaq **(Recent advances in Otorhinolaryngology)**

Time: 3 Hours

Maximum Mark: 100

Minimum Passing Marks: 50

1. The recent developments in the diagnosis pathogenesis treatments of the ENT diseases.
2. Basic knowledge of cosmetic surgeries related to ENT,
3. Endoscopic sinus surgery, and cranial fossa injury.
4. Basic knowledge of LASERS and fibre optics.
5. Other methods of managing Hearing loss.
6. Implantable hearing aids, cochlear implants.
7. Phonosurgery
8. Etiology and Managements of sleep apnoea/snoring,
9. Hypophysectomy and optic nerve decompressions.
10. Immunotherapy and modalities of the gene therapy
11. Newer techniques for Radiotherapy including, use of gamma knife for treatment of intracranial tumours and other malignancy.
12. Basic knowledge of Oncology in Amraze Uzn, Anf wa Halaq.

Final Examination

Paper-II

Time: 3 Hours

Maximum Mark: 100
Minimum Passing Marks: 50

Medical and Surgical Management of Amraz-e-Uzn, Anf wa Halaq

1. **Uzn:**

a) **Iltehab-e-Uzn (Otitis)**

- Iltehab-e-Uzn kharji aur uski jumla aqsam (Otitis externa and its all types)
- Iltihaabe Uzn wasti (Otitis Media)
 - * Iltihaabe Uzn wasti sadeedi haad (Acute suppurative otitis media)
 - * Iltihaabe Uzn wasti sadeedi muzmin (Chronic suppurative otitis media)
 - * Iltehab-e-Uzn wasti ke awarizaat (Complications of Otitis media)

- b) Iltihabe Sudgi Hulmi (Mastoiditis)
- c) Khuraj-e-Sudgi Hulmi (Mastoid abscess)
- d) Behrapan (Deafness)
- e) Taneen wa Dawi (Tinnitus)
- f) Tasallub-ul-uzn (Otosclerosis)
- g) Aarza-e- Menier(Menier's Disease)
- h) Duwar (Vertigo)
- i) Waskhul Uzn (Ear wax)
- j) Qaziul Uzn (Foreign Body in the ear)
- k) Salaat-ul-Uzn (Tumors of Ear)
- l) Labrynthitis
- m) Otosclerosis

2. **Anaf:**

- a) Iltihabe anf aur uski jumla aqsam (Rhinitis and its all types)
- b) Iltihab Tajaweefe anf aur uski aqsaam (Sinusitis & its types)
- c) Bawaseere anf (Nasal polyp)
- d) Munharif fasile anf (Deviated nasal septum)
- e) Ru'af /Nakseer (Epistaxis)
- f) Busoor wa Qurooh-e-anf (Nasal Boils & Ulcers)

- g) Fasade and Adme Sham (Disorder of olfaction)
- h) Qazaf-ul- anf (Foreign body in the Nose)
- i) Salaat-ul- anf Saleema wa Khabeesa (Nasal tumors- benign & malignant)

3. **Halaq:**

- a) Itihib-e-Balaum (Pharyngitis)
- b) Ta'zzum-e-Ghudade anfi Halaqi (Adenoid hypertrophy)
- c) Itihib-e-Lauzatain (Tonsillitis)
- d) Khuraj-e-Atrafe Laozatain (Quinsy)
- e) Itihib-e- Hanjrah (Laryngitis)
- f) Bahtus Saut (Hoarseness of voice)
- g) Salaat-e-Hanjra (Tumours of larynx)
- h) Usrul Bala (Dysphagia)

- General surgery: Head & Neck.
- Surgery of congenital deformities of nose, ear (Pinna) & trachea/oesophagus etc.
- Radiology, Imaging – computed tomography and magnetic resonance imaging, (MRI) and interventional radiology and angiography as related to E.N.T.
- 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 Otorhinolaryngology .
- Basic knowledge of General principles of faciomaxillary traumatology and also neck injury, Plastic surgery as applicable to Otorhinolaryngology .
- Basic computers, computer averaging of the biological signals and its applications in Otorhinolaryngology &Otolaryngologic equipments.
- Audiologic and speech disorders and the ir management strategies.
- Ototoxicity and Post operative complications.

Final Examination

Paper-III

Time: 3 Hours

Maximum Mark: 100
Minimum Passing Marks: 50

Amaliyat-e-Jarahiya in Uzn, Anf-wa-Halaq (Operative surgery in Otorhinolaryngology)

1. Tracheostomy
2. Tonsillectomy
3. Adenoidectomy
4. Nasal Polypectomy
5. Incision and drainage of quinsy/other abscesses,
6. S.M.R. & Septoplasty
7. Cortical mastoidectomy
8. Modified radical Mastoidectomy
9. Common emergencies: Fracture of nasal bone, stridor, tracheostomy, epistaxis, and Peritonsillar abscess
 - a) Myringotomy, Myringoplasty, grommet insertion
 - b) Antral washout and nasal biopsy
10. Biopsy from a neck mass, such as a node
11. Direct Laryngoscopy
12. Nasopharyngoscopy
13. Flexible Bronchoscopy and Oesophagoscopy
14. Aural polypectomy
15. Fibreoptic rigid endoscopy of oesophagus
16. Interanasaethmoidectomy
17. External ethmoidectomy
18. External frontoethmoidectomy
19. Maxillectomy (Partial and Total)
20. Excision of thyroglossal cyst
21. Excision of Branchial cyst
22. Excision of Pharyngeal diverticulum
23. Superficial Parotidectomy
24. Radical block dissection of the neck for metastatic nodes.
25. Total Laryngectomy
26. Laryngeal fissure

27. Repair of laryngotracheal trauma.
28. Ligation of external carotid artery
29. Facial nerve decompression
30. Pinna-Repair (Post-traumatic)
31. Surgery of choanal atresia,
32. External canal atresia-surgery
33. Functional endoscopic/sinus surgery
34. Stapedectomy
35. Tympanoplasty with mastoid surgery
36. Rhinoplasty for cosmetic purposes
37. Fibre-optic bronchoscopy and oesophagoscopy including foreign body removal
38. Cryo and Laser surgery in ENT
39. Microlaryngoscopic voice-surgery for vocal nodules, polyp and cyst etc.
40. Phonosurgery for cord palsy including type I thyroplasty
41. Skull base and parapharyngeal space surgery
42. Thyroid surgery
43. Laryngo-tracheal stenosis – surgical correction,
44. Faciomaxillary injury
45. Foreign body in Ear Nose and Throat

Recommended list of Text Books and Journals

1. Anirban Biswas, Audiological assessment
2. Anonymous, Recent advances in Otorhinolaryngology
3. B.D. Chaurasia, Human Anatomy (7th edition, Volume 2)
4. Ballenger, Diseases of the Nose, Throat, Ear, Head and Neck
5. Dr. Ghazala Mullah, Hijama (Cupping Therapy) – A Legacy of healing
6. Dr. K.K. Ramalingam and Dr. B. Sreeramoorthy, Learning ear surgery by temporal bone dissection
7. Glasscock and Shambaugh, Surgery of the ear
8. Henry Gray, Gray's Anatomy: The Anatomical Basis of Clinical Practice (41st edition)
9. John G. Batsakis, Tumours of the Head and Neck – Clinical and Pathological Considerations
10. K.B. Bhargava, A Short Book of E.N.T. Diseases (10th edition)
11. Mawson, Diseases of the ear
12. Micheal M. Paperella and Byron J. Bailey, Year book of Otorhinolaryngology, Head and Neck surgery edited
13. P.L. Dhingra & Shruti Dhingra, Diseases of Ear, Nose & Throat (7th edition)
14. Paperella Shumrick, Gluckman and Meyerhoff: 2. Otorhinolaryngology volumes I to IV
15. Rob and Smith, Operative surgery – three volumes
16. Scott Brown, Otorhinolaryngology – five volumes
17. Valvassori, Radiology of Head and Neck
18. Ali Ibn Abbas Majoosi, Kamil us Sana
19. Zakria Razi, Kitab ul Hawi fit Tib
20. Zakria Razi, Kitab ul Mansoori
21. Ali Ibn Rabban Tabri, Firdausul Hikmat
22. Ali Ibn Mohammed Tabri, Moalijat Buqratia
23. Ibne Sina, Al Qanoon fit Tib
24. Ismail Jurjani, Zakheera Khawarizam Shahi
25. Abul Qasim Zahrawi, Kitabut Tasreef
26. Ibn Zohr, Kitab ut Taiseer
27. Nooh bin Mansoor al Qamri, Ghina Muna
28. Ibn Betar, Al Jamia al Mufarradaat Advia al Aghziya
29. Allama Najeebuddin Samarqandi, Sharh-e-Asbab
30. Akbar Arzani, Qarabadeen-e- Qadri
31. Akbar Arzani, Tibb-e-Akbar

32. Mohamed Azam Khan, Muheet-e-Azam
33. Mohamed Azam Khan, Rumooz-e- Azam
34. Mohamed Azam Khan, Qarabadeen-e- Azam
35. Najmul Ghani, Khazainul advia
36. Hakeem Abdul Haleem, Muffaradaat Azeezi
37. Mohamed Azam Khan, Al Akseer
38. Maseeh-ul-Mulk Hakeem Md. Ajmal Khan, Haziq
39. Hakeem Md. Kabeeruddin: Bayaz-e-Kabeer
40. Hakeem Safiuddin, Advia-e- Muffaradat
41. Hakeem Zil-ul-Rahman, Advia-e-Mukarrabat
42. Javed Ahmad Khan, Maamulaat-e- Shareefi
43. Javed Ahmad Khan, Ijaj Bit Tadbeer.
44. Hakim Mohamed Shareef Khan ,Bayaz –e – Khas
45. Dr. Anees Shah, Amraz-e-Uzn, Anf-wa-Halaq
46. C.C.R.U.M , National Formulary of Unani Medicine
47. C.C.R.U.M , standard unani Terminology
48. C.C.R.U.M , Standard Unani Treatment and Guidelines –Full set
49. Lore, Atlas or Head and Neck Surgery
50. Ugo Fisch and DoughlasMatto, Microsurgery of the skull base
51. Lee. Text book of operative surgery

Journals:

1. Indian Journal of Otorhinolaryngology
2. British Journal of Otorhinolaryngology
3. Laryngoscope
4. North American Clinics of Otorhinolaryngology
5. Annals of Otology, Rhinology and Laryngology
6. Acta Otolaryngologica
7. Archives of Otorhinolaryngology , Head and Neck surgery
8. Journal of Paediatrics Otorhinolaryngology
