

[KQ 214] MARCH 2007 Sub. Code : 2227

M.S. DEGREE EXAMINATION.

Branch IV — E.N.T.

(Candidates admitted from 2004–05 onwards)

**Paper I — APPLIED BASIC SCIENCES IN OTO
RHINO LARYNGOLOGY**

Time : Three hours Maximum : 100 marks

**Theory : Two hours and Theory : 60 marks
twenty minutes**

M.C.Q. : Forty minutes M.C.Q. : 40 marks

Answer any TWO short notes in each subject.

All questions carry equal marks.

(ANATOMY) (2 × 5 = 10)

1. (a) Development of Lung
- (b) Vidian Nerve
- (c) Scala mardia.

(PHYSIOLOGY) (2 × 5 = 10)

2. (a) Electrical potentials in the cochlea
- (b) Taste and its pathway
- (c) Merits and demerits of various caloric tests.

(BIOCHEMISTRY) (2 × 5 = 10)

3. (a) Biochemistry of CSF in Health and diseases associated with ENT
- (b) Lipid profile
- (c) Vitamin B₁₂.

(PHARMACOLOGY) (2 × 5 = 10)

4. (a) Local Ananethetics – merits and demerits
- (b) Pharmacology of Glycerine and its uses in ENT practice
- (c) Antimitotic drugs in ENT.

(PATHOLOGY) (2 × 5 = 10)

5. (a) Pathology of glomus tumours
- (b) Tumour markers
- (c) Significant lesions of tuberculosis in E.N.T.

(MICROBIOLOGY) (2 × 5 = 10)

6. (a) Immunoglobulins
- (b) Throat swab culture in all types of pharyngitis.
- (c) Mucormycosis.

March-2008

[KS 225]

Sub. Code : 2230

M.S. DEGREE EXAMINATION.

Branch IV — E.N.T.

(Candidates admitted from 2004-05 onwards)

Paper I — APPLIED BASIC SCIENCES IN OTO
RHINO LARYNGOLOGY

Q.P. Code : 222230

Time : Three hours

Maximum : 100 marks

(ANATOMY)

Answer any FOUR questions.

(4 × 5 = 20)

- I. 1. Anatomy of tympanic segment of facial nerve
2. Paraglottic space
3. Triangles of the neck
4. Development of external ear.
5. Anatomy of lacrimal sac and nasolacrimal duct.

(PHYSIOLOGY)

Answer any **FOUR** questions.

(4 × 5 = 20)

- II. 1. Impedence matching.
2. Physiology of taste
3. Theories of olfaction.
4. Mechanism of phonation.
5. Semicircular canal functions.

(BIOCHEMISTRY)

Answer any **THREE** questions.

(3 × 5 = 15)

- III. 1. Biochemistry of inner ear fluids.
2. Biochemistry of C.S.F.
3. Constituents of saliva.
4. Essential aminoacids.

(PHARMACOLOGY)

Answer any **THREE** questions.

(3 × 5 = 15)

- IV. 1. Antioxidants
2. Cephalosporins.
3. Nasal decongestants.
4. Antifungal ear drops.

(PATHOLOGY)

Answer any **THREE** questions.

(3 × 5 = 15)

- V. 1. Amyloidosis.
2. Wegener's granulomatosis.
3. Pathology of cholesteatoma
4. Autoimmune diseases of thyroid.

March-2008

(MICROBIOLOGY)

Answer any THREE questions.

(3 × 5 = 15)

- VI. 1. Antimicrobial susceptibility tests.
2. Hypersensitivity reactions.
3. Lifecycle of Rhinosporidium
4. Corynebacterium diphtheriae.
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September 2008

[KT 225]

Sub. Code: 2230

M.S. DEGREE EXAMINATION

Branch IV – E.N.T.

**Paper I – APPLIED BASIC SCIENCES IN OTO RHINO
LARYNGOLOGY**

(For candidates admitted from 2004-2005 onwards)

Q.P. Code : 222230

Time : Three hours

Maximum : 100 marks

All questions carry equal marks.

I. ANATOMY – Answer any FOUR : (4 X 5 = 20)

1. Development of Auricle.
2. Lateral sinus.
3. Bronchopulmonary segments.
4. Surgical anatomy of sphenopalatine foramen.
5. Muscles of the soft palate.

II. PHYSIOLOGY – Answer any FOUR : (4 X 5 = 20)

1. Cochlear microphonics.
2. Maintenance of equilibrium.
3. Theories of Hearing.
4. Otolithic organ illusion.
5. Physiology of deglutition.

III. BIOCHEMISTRY – Answer any THREE : (3 X 5 = 15)

1. Neurotrophic vitamins.
2. Production of electric impulses.
3. Proteins in nasal secretion.
4. Respiratory Acidosis.

IV. PHARMACOLOGY – Answer any THREE : (3 X 5 = 15)

1. Drugs used in AIDS treatment.
2. Non-sedative antihistaminics.
3. Mast cell stabilizers.
4. Aminoglycosides.

V. PATHOLOGY – Answer any THREE : (3 X 5 = 15)

1. Aphthous ulcer.
2. Rhabdomyosarcoma.
3. Inverted papilloma.
4. Fine needle aspiration cytology.

VI. MICROBIOLOGY – Answer any THREE : (3 X 5 = 15)

1. Types of fungus in ENT practice.
 2. Bacterial Biofilms.
 3. β Haemolytic streptococci.
 4. Vincents and Fusiform Bacillus.
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March 2009

[KU 225]

Sub. Code: 2250

M.S. DEGREE EXAMINATION

Branch IV – E.N.T.

(For candidates admitted from 2004-2005 to 2008-2009 onwards)

**Paper I – APPLIED BASIC SCIENCES IN
OTO RHINOLARYNGOLOGY**

Q.P. Code : 222250

Time : Three hours

Maximum : 100 marks

All questions carry equal marks

I. ANATOMY – Answer any FOUR : (4 x 5 = 20)

1. Facial recess.
2. Trotman's Triangle.
3. Recurrent laryngeal nerve.
4. Uncinate process.
5. Nasal tip supports.

II. PHYSIOLOGY – Answer any FOUR : (4 x 5 = 20)

1. Stapedial reflex.
2. Theories of hearing.
3. Nasal cycle.
4. Mechanism of speech.
5. Circulation of CSF.

III. BIOCHEMISTRY – Answer any THREE : (3 x 5 = 15)

1. Endolymph analysis.
2. Metabolic alkalosis.
3. Biochemical analysis of saliva.
4. Nasal crusts.

IV. PHARMACOLOGY – Answer any THREE : (3 x 5 = 15)

1. Aminoglycosides.
2. Chemicals used for cautery.
3. Topical steroids.
4. Lignocaine.

V. PATHOLOGY – Answer any THREE : (3 x 5 = 15)

1. Pathology of meningioma.
2. Vasovagal attack.
3. Histopathology of atrophic rhinitis.
4. Brain abscess pathology.

V1. MICROBIOLOGY – Answer any THREE : (3 x 5 = 15)

1. Human immuno deficiency virus.
2. Immuno globulin A.
3. Candida.
4. β haemolytic streptococci.

September 2009

[KV 225]

Sub. Code: 2250

M.S. DEGREE EXAMINATION

Branch IV – E.N.T.

(For candidates admitted from 2004-2005 to 2008-2009 onwards)

**Paper I – APPLIED BASIC SCIENCES IN
OTO RHINOLARYNGOLOGY**

Q.P. Code : 222250

Time : Three hours

Maximum : 100 marks

All questions carry equal marks

I. ANATOMY – Answer any FOUR : (4 x 5 = 20)

1. Piriform fossa.
2. Sphenoid sinus.
3. Eustachian tube.
4. Neck spaces.
5. Jugular bulb.

II. PHYSIOLOGY – Answer any FOUR : (4 x 5 = 20)

1. Physiology of bone conduction.
2. Physiology of nasal respiration.
3. Physiology of Waldeyer's ring.
4. Physiology of speech articulation.
5. Nasal reflex.

III. BIOCHEMISTRY – Answer any THREE : (3 x 5 = 15)

1. Biochemistry of lymph.
2. Biochemical changes during stridor and after tracheostomy.
3. Biochemical changes of CSF during meningitis.
4. Biochemical changes of labyrinthine fluids during labyrinthitis.

IV. PHARMACOLOGY – Answer any THREE : (3 x 5 = 15)

1. Antimalignancy drugs used in head and neck cancer.
2. Aminoglycoside drugs.
3. Non-sedative antihistamines.
4. Local anaesthetics.

V. PATHOLOGY – Answer any THREE : (3 x 5 = 15)

1. Pathology of nasal polyp.
2. Cholesteatoma.
3. Tubercular mastoiditis.
4. Malignant melanoma.

V1. MICROBIOLOGY – Answer any THREE : (3 x 5 = 15)

1. Bacteriology of CSOM.
2. Fusiform bacillus.
3. Rhinosporidiosis.
4. Adeno virus.

March 2010

[KW 225]

Sub. Code: 2250

M.S. DEGREE EXAMINATION

Branch IV – E.N.T.

Common to

**Paper I - (For candidates admitted from 2004-2005 to 2007-08) and
Part I – (For candidates admitted for 2008-09 onwards)**

**APPLIED BASIC SCIENCES IN
OTO RHINO LARYNGOLOGY**

Q.P. Code : 222250

Time : Three hours

Maximum : 100 marks

Answer ALL questions

Draw suitable diagram wherever necessary

I. ANATOMY (4 x 5 = 20)

1. Infratemporal fossa.
2. Petrous apex and its approaches.
3. Spaces of posterior mesotympanum.
4. Cavernous sinus.

II. PHYSIOLOGY (4 x 5 = 20)

1. Physiology of eustachian tube function.
2. Physiology of inner ear fluids.
3. Physiology of balance.
4. Physiology of swallowing.

III. BIOCHEMISTRY (3 x 5 = 15)

1. Sialochemistry.
2. Biochemical changes in high altitudes.
3. Respiratory control of acid base balance.

IV. PHARMACOLOGY (3 x 5 = 15)

1. Nonviral vectors in gene therapy.
2. Drug induced sialadenitis.
3. General anesthetics.

V. PATHOLOGY (3 x 5 = 15)

1. Ameloblastoma - histopathology and subtypes.
2. Nasopharyngeal carcinoma - etiopathogenesis and histological classification.
3. Nodular fasciitis.

VI. MICROBIOLOGY (3 x 5 = 15)

1. Retroviruses in ENT practice.
2. Mycology of allergic fungal Rhino-sinusitis.
3. Serological tests for syphilis.

Branch IV – E.N.T.

**APPLIED BASIC SCIENCES IN OTO RHINO
LARYNGOLOGY**

**Paper I - (For candidates admitted from 2004-2005 to 2007-08) and
Part I – (for candidates admitted from 2008-09 onwards)**

Q.P. Code : 222230

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. ANATOMY

(4 X 5 = 20)

1. Name middle ear mucosal folds and its functions.
2. Osteomeatal Complex.
3. Epiglottis.
4. Posterior triangle of neck.

II. PHYSIOLOGY

(4 X 5 = 20)

1. Physiology of Phonation.
2. Functions of saliva.
3. Semicircular canal functions.
4. Functions of tonsils.

III. BIOCHEMISTRY

(3 X 5 = 15)

1. Immunoglobulins.
2. Biochemistry of CSF.
3. Constituents of Perilymph.

IV. PHARMACOLOGY

(3 X 5 = 15)

1. Preanaesthetic medication.
2. Corticosteroid use in otorhinolaryngology.
3. Antifungal ear drops.

V. PATHOLOGY

(3 X 5 = 15)

1. Fine needle aspiration cytology.
2. Pathology of cholesteatoma.
3. Tubercular granuloma.

VI. MICROBIOLOGY

(3 X 5 = 15)

1. Bacteriology of chronic otitis media.
2. Rhinosporidium life cycle.
3. Aspergillus niger.

M.S. DEGREE EXAMINATION

BRANCH IV – E.N.T.

APPLIED BASIC SCIENCES IN OTO RHINO
LARYNGOLOGYTime : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

Write notes on

Pages (Max.)	Time (Max.)	Marks (Max.)
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I. ANATOMY

1. Fossa of Rossenmuller.	3	9	5
2. Facial Recess and Tympanic Recess.	3	9	5
3. Unpaired cartilages of larynx.	3	9	5
4. Cricopharynx.	3	9	5

II. PHYSIOLOGY

1. Olfaction.	3	9	5
2. Phonation.	3	9	5
3. Alternate Taste Pathway.	3	9	5
4. Inner Ear protection from loud sounds.	3	9	5

III. BIOCHEMISTRY

1. Normal and alterations in CSF biochemistry.	3	9	5
2. Biochemistry of inner Ear fluids.	3	9	5
3. Biochemical changes in Acute Stridor.	3	9	5

IV. PHARMACOLOGY

1. Intranasal steroids.	3	9	5
2. Cisplatinum.	3	9	5
3. Xylocaine.	3	9	5

V. PATHOLOGY

1. Inverted Papilloma.	3	9	5
2. Verrucous Carcinoma.	3	9	5
3. Leukoplakia.	3	9	5

VI. MICROBIOLOGY

1. Chemical methods of Sterilization.	3	9	5
2. Skin Prick tests for Allergy.	3	9	5
3. Nosocomial infection.	3	9	5

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.
APPLIED BASIC SCIENCES IN OTO RHINO
LARYNGOLOGY
Q.P. Code : 222230**

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

Write notes on

**Pages Time Marks
(Max.) (Max.) (Max.)**

I. ANATOMY

- | | | | |
|---|---|---|---|
| 1. Theories of Pneumatization of mastoid air cell system. | 3 | 9 | 5 |
| 2. Vomero nasal organ of Jacobson- Site and applied importance. | 3 | 9 | 5 |
| 3. Normal oesophageal constrictions. | 3 | 9 | 5 |
| 4. Anatomy and applied importance of Post cricoid region. | 3 | 9 | 5 |

II. PHYSIOLOGY

- | | | | |
|---|---|---|---|
| 1. Mucocillary apparatus of Nasal Mucosa. | 3 | 9 | 5 |
| 2. Fibrinolytic system. | 3 | 9 | 5 |
| 3. Salivary Secretions | 3 | 9 | 5 |
| 4. Physiology of artificial Voice. | 3 | 9 | 5 |

III. BIOCHEMISTRY

- | | | | |
|--|---|---|---|
| 1. Metabolic acidosis. | 3 | 9 | 5 |
| 2. Biochemical changes after Thyroidectomy. | 3 | 9 | 5 |
| 3. Mechanism and biochemical importance of asphyxia. | 3 | 9 | 5 |

IV. PHARMACOLOGY

- | | | | |
|--|---|---|---|
| 1. Anti Histamines- Types, Mechanism of action and usage. | 3 | 9 | 5 |
| 2. Derivative, mechanism of action and Usage of Fluconazole. | 3 | 9 | 5 |
| 3. Xylocaine and its applications in ENT. | 3 | 9 | 5 |

V. PATHOLOGY

- | | | | |
|--------------------------------------|---|---|---|
| 1. Premalignant conditions in ENT. | 3 | 9 | 5 |
| 2. FNAC and its significance in ENT. | 3 | 9 | 5 |
| 3. Acoustic neuroma. | 3 | 9 | 5 |

VI. MICROBIOLOGY

- | | | | |
|---|---|---|---|
| 1. Procedure and inference of Acid fast staining. | 3 | 9 | 5 |
| 2. Procedure and inference of Schick's test. | 3 | 9 | 5 |
| 3. Structure of Herpes virus and diseases caused by it. | 3 | 9 | 5 |

M.S. DEGREE EXAMINATION

BRANCH IV – E.N.T.

APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code : 222230

Time: Three Hours

Maximum: 100 marks

Answer ALL questions in the same order.

Write notes on:

I. ANATOMY (4 x 5 = 20)

1. Deep Cervical Fascia
2. Cochlear duct
3. Osteo meatal complex
4. Semi circular canal

II. PHYSIOLOGY (4 x 5 = 20)

1. Endo cochlear potentials
2. Physiology of smell
3. Superior mediastinum
4. Bohr effect

III. BIO-CHEMISTRY (3 x 5 = 15)

1. Essential fatty acids
2. Bio chemistry of salivary secretions
3. Blood group antigens

IV. PHARMACOLOGY (3 x 5 = 15)

1. Lora tadine
2. Aminoglycosides
3. Halothane Anaesthesia

V. MICROBIOLOGY (3 x 5 = 15)

1. Otomycosis
2. Skin prick test for allergy
3. Normal flora of the throat

VI. PATHOLOGY (3 x 5 = 15)

1. Naso pharyngeal carcinoma
2. Cardinal features of acute inflammation
3. Midline malignant Reticuloses.

[LD 225]

OCTOBER 2013

Sub. Code: 2230

M.S. DEGREE EXAMINATION

BRANCH IV – E.N.T.

APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code : 222230

Time: Three Hours

Maximum: 100 marks

Answer ALL questions in the same order.

Write notes on:

I. ANATOMY

(4 x 5 = 20)

1. Sinus of Morgagni.
2. Describe the course and branches of facial artery.
3. Fissula ante fenestram and fossula post fenestram.
4. Sigmoid sinus.

II. PHYSIOLOGY

(4 x 5 = 20)

1. Stapedial reflex.
2. Physiology of gustatory system.
3. Describe the physiology of olfaction.
4. Vestibulo spinal reflex.

III. BIO-CHEMISTRY

(3 x 5 = 15)

1. Biochemical changes during stridor.
2. Composition of Perilymph.
3. Plasmaproteins.

IV. PHARMACOLOGY

(3 x 5 = 15)

1. Cisplatin.
2. Describe the indications, side effects and dosage for Amphotericin B.
3. Chemoprevention.

V. MICROBIOLOGY

(3 x 5 = 15)

1. Rhizopus.
2. Epstein Barr Virus.
3. Pseudomonas Aeruginosa.

VI. PATHOLOGY

(3 x 5 = 15)

1. Wegener's granulomatosis.
2. Hashimoto's thyroiditis.
3. Maltoma.

[LE 225]

APRIL 2014

Sub. Code: 2230

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code :222230

Time : Three Hours

Maximum : 100 marks

Write Notes on :

I. ANATOMY:

(4X5=20)

1. Embryology of Hillock of His and its derivatives.
2. Velopharyngeal sphincter.
3. Describe the boundaries, contents and relations of the submandibular triangle.
4. Otic capsule.

II. PHYSIOLOGY:

(4X5=20)

1. Trace the vestibular pathway.
2. Describe the mucociliary function of nose and sinus.
3. Platelet function.
4. Acoustic reflex.

III. BIO-CHEMISTRY:

(3X5=15)

1. Biochemistry of saliva.
2. Maintenance of pH of blood.
3. Pituitary function tests.

IV. PHARMACOLOGY:

(3X5=15)

1. 5- flurouracil.
2. Dapsone.
3. Piperazines.

V. PATHOLOGY:

(3X5=15)

1. frozen section.
2. Paraganglioma.
3. Adenoid cystic carcinoma.

VI. MICROBIOLOGY:

(3X5=15)

1. Cytokines.
2. Actinomycosis.
3. Swine flu virus.

[LG 225]

APRIL 2015

Sub. Code: 2230

M.S. DEGREE EXAMINATION

BRANCH IV – E.N.T.

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code : 222230

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

Write notes on:

I. ANATOMY

(4 x 5 = 20)

1. Development of Mucosal folds of middle ear.
2. Ultra structure of the cilia of the nasal mucosa.
3. Optic Nerve.
4. Anatomy of the superior and inferior para thyroid.

II. PHYSIOLOGY

(4 x 5 = 20)

1. Role of middle ear in Hearing.
2. Physiology of Taste.
3. Functions of the soft palate.
4. Functions of the larynx.

III. BIO-CHEMISTRY

(3 x 5 = 15)

1. Composition of Endolymph.
2. Diabetic Keto Acidosis.
3. Vitamin D and Calcium metabolism.

IV. PHARMACOLOGY

(3 x 5 = 15)

1. Linezolid.
2. Fluticazone Furoate.
3. Acetazolamide.

V. PATHOLOGY

(3 x 5 = 15)

1. Pathology of Glomus Tumours.
2. Rhinosporidiosis.
3. Barrett's Oesophagitis.

VI. MICROBIOLOGY

(3 x 5 = 15)

1. Corynebacterium Diphtheria.
2. Bio-films.
3. Mucor.

[LI 225]

APRIL 2016

Sub. Code: 2230

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

**PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY
Q.P. Code :222230**

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY: (4 x 5 = 20)

1. Nasal Septum.
2. Organ of Corti.
3. Cricopharynx.
4. Paraglottic Space.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Nasal Cycle.
2. Auditory Pathway.
3. Protection of Lower Airway.
4. Physiology of Taste.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Biochemical changes in Upper Airway Obstruction.
2. Normal and Variations in Inner Ear Fluid composition.
3. Sialo chemistry.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Topical Steroids.
2. Non sedating Antihistamines.
3. Pharmacotherapy of MDR Tuberculosis.

V. PATHOLOGY: (3 x 5 = 15)

1. Rhinoscleroma.
2. Histological classification of Carcinoma.
3. Chemical Mediators of Inflammation.

VI. MICROBIOLOGY: (3 x 5 = 15)

1. Rhinosporidiosis.
2. Hospital Acquired Infection.
3. Role of Pus Culture and Sensitivity.

[LJ 225]

OCTOBER 2016

Sub. Code: 2230

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

**PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY
Q.P. Code :222230**

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY: (4 x 5 = 20)

1. Internal Acoustic meatus.
2. Anatomy of Ethmoid.
3. Intrinsic Muscles of Larynx.
4. Deep Cervical Fascia.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Middle Ear Impedance Matching Mechanism.
2. Functions of Larynx.
3. Physiology of Swallowing.
4. Nasal Resistance.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Respiratory Regulation of PH.
2. Composition of CSF.
3. Biochemistry of Inner Ear Fluids.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Vasodilators in ENT practice.
2. Chemotherapy agents in Head and Neck Malignancy.
3. Pre Anesthetic medication.

V. PATHOLOGY: (3 x 5 = 15)

1. Vestibular schwannoma.
2. Pathology in Atrophic Rhinitis.
3. Laryngeal Intraepithelial Neoplasia.

VI. MICROBIOLOGY: (3 x 5 = 15)

1. Mucor Mycosis.
2. Viruses implicated in Carcinogenesis.
3. Delayed Hypersensitivity.

[LK 225]

MAY 2017

Sub. Code: 2230

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

**PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY
Q.P. Code :222230**

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY:

(4 x 5 = 20)

1. Peripharyngeal spaces of neck.
2. Ostiomeatal complex.
3. Medial wall of Middle Ear.
4. Left Recurrent Laryngeal Nerve.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Theories of Hearing
2. Functions of the Nose.
3. Physiology of Balance.
4. Phonation.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Respiratory control of Acid base Balance.
2. Compare Endolymph, Perilymph and CSF.
3. Thyroid function tests.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Uses of Steroids in ENT practice.
2. Ototoxic drugs.
3. Topical Anesthesia in ENT.

V. PATHOLOGY:

(3 x 5 = 15)

1. Fine needle aspiration cytology.
2. Pathology of Nasopharyngeal Angiofibroma.
3. Premalignant lesions of oral cavity.

VI. MICROBIOLOGY:

(3 x 5 = 15)

1. Aspergillus niger.
2. Immunoglobulins.
3. Gram staining.

M.S. DEGREE EXAMINATION**BRANCH IV – E.N.T.****PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY***Q.P. Code :222230***Time : Three Hours****Maximum : 100 Marks****Write Notes on :****I. ANATOMY:****(4 x 5 = 20)**

1. Triangles of the neck.
2. Spaces of posterior mesotympanum.
3. Piriform fossa.
4. Surgical anatomy of sphenopalatine foramen.

II. PHYSIOLOGY:**(4 x 5 = 20)**

1. Organ of Corti.
2. Nasal cycle.
3. Physiology of bone conduction.
4. Physiology of balance.

III. BIO-CHEMISTRY:**(3 x 5 = 15)**

1. Biochemical changes in labyrinthine fluid during labyrinthitis.
2. Constituents of perilymph.
3. CSF in intracranial complications.

IV. PHARMACOLOGY:**(3 x 5 = 15)**

1. Antimitotic drugs.
2. Drug induced sialadenitis.
3. Posaconazole.

V. PATHOLOGY:**(3 x 5 = 15)**

1. Tuberculosis in ENT.
2. Inverted papilloma.
3. Cholesteatoma.

VI. MICROBIOLOGY:**(3 x 5 = 15)**

1. Bacteriology of CSOM.
2. Mycology of AFRS.
3. Epstein Barr Virus.

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code :222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY:

(4 x 5 = 20)

1. Anatomy of Endolymphatic Sac and Duct.
2. Fossa of Rosen Muller.
3. Trace the secretomotor pathway to submandibular salivary gland.
4. Para pharyngeal space.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Role of middle ear in hearing.
2. Physiology of phonation.
3. Stapedial Reflex.
4. Mechanism of Breathing.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Biochemical changes during sleep apnea.
2. Composition of CSF.
3. Trace Elements.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Azelastine.
2. Guaiphenesine.
3. Itraconazole.

V. PATHOLOGY:

(3 x 5 = 15)

1. Schwannoma .
2. Spindle Cell Cancer.
3. Schneiderian tumour.

VI. MICROBIOLOGY:

(3 x 5 = 15)

1. Pseudomonas Aeruginosa.
2. Type I Hyper sensitivity.
3. Ebstein Barr Virus.

M.S. DEGREE EXAMINATION**BRANCH IV – E.N.T.****PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY***Q.P. Code: 222230***Time : Three Hours****Maximum : 100 Marks****Write Notes on :****I. ANATOMY: (4 x 5 = 20)**

1. Cavernous sinus communications.
2. Petrous part of temporal bone.
3. Larynx of an infant.
4. Pterygopalatine fossa.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Perilymph.
2. Alternate taste pathway.
3. Physiology of olfaction.
4. Theories of phonation.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Biochemical changes after tracheostomy.
2. Iron metabolism.
3. Proteins in nasal secretions.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Corticosteroids.
2. Drug induced ototoxicity.
3. Chemotherapeutic drugs used in head and neck cancers.

V. PATHOLOGY: (3 x 5 = 15)

1. Sjogren's syndrome.
2. Acoustic neuroma.
3. Paraganglioma of head and neck.

VI. MICROBIOLOGY: (3 x 5 = 15)

1. Actinomyces.
2. Life cycle of rhinosporidiosis.
3. Mucor mycosis.

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY:

(4 x 5 = 20)

1. Branches of External carotid artery.
2. Sphenoid sinus.
3. Internal auditory meatus.
4. Pre-epiglottic space.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Physiology of smell.
2. Vestibulo ocular reflex.
3. Special Tuning fork tests.
4. Hypothyroidism.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. CSF analysis for meningitis.
2. Respiratory acidosis.
3. Diabetic ketoacidosis.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Antihistamines.
2. Drugs used in Invasive fungal sinusitis.
3. Lignocaine.

V. PATHOLOGY:

(3 x 5 = 15)

1. Carotid body tumour.
2. Human papilloma virus.
3. Laboratory tests for epistaxis.

VI. MICROBIOLOGY:

(3 x 5 = 15)

1. Immunoglobulin E.
2. Angioneurotic edema.
3. Beta haemolytic streptococci.

[LP 225]

OCTOBER 2019

Sub. Code: 2230

**M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.**

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY:

(4 x 5 = 20)

1. Mastoid air cell system.
2. Sacculle of larynx.
3. Sphenopalatine foramen.
4. Surgical anatomy of parotid salivary gland.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Protective reflexes in ENT.
2. CSF Production and its circulation.
3. Watering of Eyes.
4. Stages of deglutition.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Biochemical changes in total laryngectomy.
2. Thyroid function test and its significance.
3. Vitamin K.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Immunotherapy for allergy.
2. Adrenaline usage in ENT practice.
3. Acebrophylline in ENT.

V. PATHOLOGY:

(3 x 5 = 15)

1. Fibrous dysplasia.
2. Otospongiosis.
3. Paragangliomas of ear.

VI. MICROBIOLOGY:

(3 x 5 = 15)

1. Biofilm.
2. Rhinosporidium seeberi and its life cycle in human.
3. Mucormycosis.

[LQ 225]

AUGUST 2020
(MAY 2020 SESSION)

Sub. Code: 2230

M.S. DEGREE EXAMINATION
BRANCH IV – E.N.T.

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY: (4 x 5 = 20)

1. Lateral nasal wall
2. Medial wall of middle ear
3. Frontal sinus
4. Surgical anatomy of facial nerve

II. PHYSIOLOGY: (4 x 5 = 20)

1. Auditory pathway
2. Nystagmus
3. Nasal valve
4. Noise pollution on health

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Biochemistry of salivary secretion
2. Biochemical changes during stridor and after tracheostomy
3. Composition of perilymph

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Topical steroids
2. Antifungal ear drops
3. Antihistamines – Types, Mechanism of action and usage

V. PATHOLOGY: (3 x 5 = 15)

1. Atrophic Rhinitis
2. Serous otitis media
3. Vocal nodule

VI. MICROBIOLOGY: (3 x 5 = 15)

1. Immunoglobulin
2. Corona virus
3. Pseudomonas

[MS 0721]

JULY 2021

Sub. Code: 2230

(MAY 2021 SESSION)

M.S. DEGREE EXAMINATION

BRANCH IV – E.N.T.

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY:

(4 x 5 = 20)

1. Sinus tympani and facial recess.
2. Blood supply of lateral wall of nose.
3. Killian's dehiscence.
4. Thyroid gland.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Phases of swallowing.
2. Difference between endolymph and perilymph.
3. Voice production.
4. Functions of nose and paranasal sinus.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. CSF analysis.
2. Thyroid analysis.
3. Biochemical changes of laryngectomy.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Cephalosporins.
2. Drugs for GERD.
3. Drugs for vasomotor rhinitis.

V. PATHOLOGY:

(3 x 5 = 15)

1. Influenza virus.
2. Invasive fungal sinusitis.
3. Oncogenes in ENT.

VI. MICROBIOLOGY:

(3 x 5 = 15)

1. Types of hypersensitivity.
2. Nosocomial infections in ENT.
3. Sterilisation of instruments.

THE TAMIL NADU DR.M.G.R MEDICAL UNIVERSITY

[MS 0522]

MAY 2022

Sub. Code: 2230

M.S. DEGREE EXAMINATION

BRANCH IV – OTO-RHINO-LARYNGOLOGY

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY: (4x5=20)

1. Nasal Septum
2. Blood supply of Tonsils.
3. Sphenoid Sinus.
4. Anterior Ethmoidal artery

II. PHYSIOLOGY: (4x5=20)

1. Utricle & Sacculle
2. Olfaction
3. Physiology of deglutition
4. Function of outer hair cells

III. BIO-CHEMISTRY: (3x5=15)

1. Respiratory alkalosis
2. D.Dimer test in Covid
3. Difference between Endolymph and Perilymph

IV. PHARAMACOLOGY: (3x5=15)

1. Drugs against Pseudomonas
2. Local anesthetic drugs in ENT
3. Nasal Decongestant

V. PATHOLOGY: (3x5=15)

1. Carcinoma in situ
2. Pathology of Nasal polyps.
3. Apoptosis

VI. MICROBIOLOGY: (3x5=15)

1. Type IV Hypersensitivity
2. Invasive fungal sinusitis
3. Sterilization of Hopkins rod telescopes

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MS 1022]

OCTOBER 2022

Sub. Code: 2230

M.S. DEGREE EXAMINATION

BRANCH IV – OTO-RHINO-LARYNGOLOGY

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY: (4x5=20)

1. Jacobson's organ.
2. Vestibular nuclei.
3. Petrous part of temporal bone.
4. Trachea.

II. PHYSIOLOGY: (4x5=20)

1. Phonation.
2. Olfactory pathway.
3. Cough reflex.
4. Pulmonary function test.

III. BIO-CHEMISTRY: (3x5=15)

1. Thyroid function test.
2. Biochemical changes in CSF in a case of viral meningitis.
3. Role of arterial blood gas analysis in a stridor patient.

IV. PHARMACOLOGY: (3x5=15)

1. Role of antiviral therapy in Bell's palsy.
2. Posaconazole.
3. Recent advances in treatment of allergic rhinitis.

V. PATHOLOGY: (3x5=15)

1. Rhinosporidiosis.
2. Labyrinthitis.
3. Plummer Vinson syndrome.

VI. MICROBIOLOGY: (3x5=15)

1. Membranous tonsillitis.
2. Human Papilloma virus.
3. Mucormycosis.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MS 0723]

JULY 2023

Sub. Code: 2230

(MAY 2023 EXAM SESSION)

M.S. DEGREE EXAMINATION

BRANCH IV – OTO-RHINO-LARYNGOLOGY

PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY:

(4 x 5 = 20)

1. Anatomy of facial recess.
2. Antrum of Highmore.
3. Anatomy of unpaired laryngeal cartilages.
4. Reinke's space.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Auditory pathway.
2. Physiology of Taste.
3. CSF production and its circulation.
4. Functions of Paranasal sinuses.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Extracellular fluid.
2. Endolymph.
3. Gene therapy.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Role of Topical Medication in nasal allergy.
2. Amphotericin B.
3. Vasodilators in ENT practice.

V. PATHOLOGY:

(3 x 5 = 15)

1. Premalignant lesions of oral cavity.
2. Schwannoma.
3. Cancer immunology.

VI. MICROBIOLOGY:

(3 x 5 = 15)

1. Bio film.
2. Epstein-Barr Virus.
3. Bacteriology of Chronic Otitis Media.

THE TAMIL NADU DR.M.G.R MEDICAL UNIVERSITY

[MS 1223]

DECEMBER 2023
(OCTOBER 2023 EXAM SESSION)

Sub. Code: 2230

M.S. DEGREE EXAMINATION
BRANCH IV – OTO-RHINO-LARYNGOLOGY
PAPER I – APPLIED BASIC SCIENCES IN OTO RHINO LARYNGOLOGY

Q.P. Code: 222230

Time : Three Hours

Maximum : 100 Marks

Write Notes on :

I. ANATOMY: (4x5=20)

1. Larynx of an infant.
2. Skull base in sphenoid sinus.
3. Branches of external carotid artery.
4. Organ of Corti.

II. PHYSIOLOGY: (4x5=20)

1. Protective reflexes in ENT.
2. Maintenance of posture.
3. Nasal Cycle.
4. Vasovagal shock.

III. BIO-CHEMISTRY: (3x5=15)

1. Metabolic acidosis.
2. Trace Elements.
3. Krebs cycle.

IV. PHARMACOLOGY: (3x5=15)

1. Drugs for malignant otitis externa.
2. Bupivacaine.
3. Anti Emetics.

V. PATHOLOGY: (3x5=15)

1. Stages of cancer.
2. Pathology of Cholesteatoma.
3. Fine needle aspiration cytology.

VI. MICROBIOLOGY: (3x5=15)

1. Pseudomonas Aeruginosa.
2. IgG4-Related disease.
3. Diphtheria.
