

COURSE TITLE: APPLIED AUDIOLOGY AND REHABILITATION

Study Hours: 60+160
Paper : 1
Term : 4th

Marks
Theory: 120

Practical: 30
Time: 3Hrs

COURSE CONTENTS

(THEORY +PRACTICAL)

BASIC TESTS OF HEARING AND AUDITORY MECHANISM

A.TUNING FORK TESTS:

- A1 Rinne and Weber
- A2 Interpretation of Results.

B.PURE TONE AUDIOMETRY:

- B1 Basic components,
- B2 Types and function of Audiometer,
- B3 Daily checks
- B4 Test Procedure
- B5 Preparation of Patient for Audiometry,
- B6 Instructions, Earphones
- B7 Bone Vibrator and insert Earphones,
- B8 Placement, Hygiene, Masking Procedure, Interaural Attenuation,
- B9 Rules of Masking
- B10 Types of Masking
- B11 Plateau Technique
- B12 Central masking
- B13 Cross masking
- B14 Format of Audiogram
- B15 Masking Chart
- B16 Sources of error
- B17 Uncomfortable Loudness Level (ULL)
- B18 Dynamic range
- B19 Screening Audiometry,
- B20 Industrial Audiometry,
- B21 Self-Recording audiometry,
- B22 Non-organic Hearing loss,
- B23 Stenger Test,
- B24 Tone Decay test,
- B25 Interpretations of Results.

C.IMPEDANCE TEST/TYMPANOMETRY+STAPEDIAL REFLEXES:

- C1 Basic components of Equipment,
- C2 units of measurement,
- C3 Principles of operation,
- C4 Daily checks, hygiene, Preparation of subject, contra-indications,
- C5 procedure for tympanometry and acoustic reflexes measurements,
- C6 Normal Ranges,
- C7 Tests of Eustachian Tube.

D.ADDITIONAL TESTS:

D1 ELECTROPHYSIOLOGIC TESTS:

- D1.1 BERA Test Theory,
- D 1.2 CERA Test theory,
- D1.3EcochG Test theory

D2 PAEDIATRIC AUDIOLOGY:

- D2.1 Distraction test with c-chime Bar
- D2.2 G-chime Bar and Manchester Rattles.
- D2.3 Visual reinforcement Audiometry (VRA),
- D2.4 ERA, Otoacoustic emissions,

E) SURGICAL MANAGEMENT OF HEARING AND BALANCE DISORDERS:

- E1.Stapedectomy
- E2 Mastoidectomy
- E3 Myringotomy
- E4 Ventilation Tubes
- E5 Tympanoplasty
- E5 Tonsillectomy
- E6 Adenoidectomy
- E7 Vestibular Surgery,
- E8 Acoustic Neuroma Surgery

F) MEDICAL TREATMENT:

- F1 Use of Antibiotics
- F2 Use of decongestants
- F3 Use of vestibular medication

RECOMMENDED BOOK

1. Textbook of Ear, Nose and Throat Diseases 12th Edition by [Mohammad Maqbool](#) (Editor), [Suhail Maqbool](#) (Editor), [Suresh C. Sharma](#) (Foreword)
2. Ear, Nose and Throat Diseases P.L Dhingra 7th Edition.
3. Pediatric Audiology (0-5 Years) By Barrey McCormick, PhD.
4. Educational Audiology By Ivan Tucker and Michael Nolan.
5. Principles of Hearing Aid Audioogy By Maryanne Tate.
6. Handbook of Clinical Audiology, Fifth Edition. Jack Katz, editor. (April 26, 2002)
7. Hearing Aids. Harvey Dillon. (May 3, 2002)
8. Introduction to Audiology, Eighth Edition. Frederick N. Martin and John Greer Clark. (November 19, 2003)

REFERENCE BOOKS

1. Foundations of Pediatric Audiology. Fred H. Bess and Judith S. Gravel (May 13, 2008).
Reviewed by Jane B. Seaton, M.S., Audiology and Communication Disorders Consultant, Seaton Consultants, Athens, GA
2. Fundamentals of Hearing: An Introduction, 5th Edition. William A. Yost (April 21, 2008).
Reviewed by Jerry L. Northern, PhD, Professor Emeritus, University of Colorado School of Medicine Department of Otolaryngology (Audiology), Denver, CO.
3. Hearing: Anatomy, Physiology, and Disorders of the Auditory System. Aage R. Moller (December 20, 2006).
4. Hearing Instrument Technology for the Hearing Health Care Professional. Andi Vonlanthen and Horst Arndt. (September 29, 2006).
5. Acoustics for Audiologists. Peter Haughton. (January 9, 2003)
6. Better Communication and Hearing Aids: A Guide to Hearing Aid Use. Donna S. Wayner and Judy E. Abrahamson. (January 30, 2003)
7. Color Atlas of Otoscopy: From Diagnosis to Surgery. Sanna, M., Russo, A., DeDonato, G., Caruso, A., and Taibah, A. (May 16, 2003)
8. Counseling Children With Hearing Loss and Their Families. Kristina M. English. (April 26, 2002).
9. Fundamentals of Sound with Applications to Speech and Hearing. William J. Mullin, William J. Gerace, Jose P. Mestre, and Shelley L. Velleman (March 3, 2004)
10. Otoacoustic Emissions: Clinical Applications, Second Edition. Martin S. Robinette and Theodore J. Glattke, editors. (April 26, 2002)

COURSE TITLE: HEARING AID AUDIOLOGY

Study Hours: 60+160

Paper : 2

Term : 4th

Marks

Theory: 120

Practical: 30

Time: 3Hrs

HEARING AID AUDIOLOGY:

A.HEARING AIDS:

A1 Types of Hearing Aids

A2 components of Hearing Aids

A3 Analogue and Digital Hearing Aids

A4 Hearing aid characteristics

A5 Batteries used in Hearing Aids

A6 Frequency response

A7 Effect of Tone and Gain controls

A8 Peak Clipping Hearing Aids

A9 Hearing Aid Analyzer

A10 Bone Anchored Hearing Aid

A11 Bone conduction Hearing Aids

A12 Cochlear implants

A13 Principles of Hearing Selection and fitting

A14 Monaural fitting and Binaural fitting

A15 Prescriptive Formulae of Hearing aid fitting

A16 Bands and channels of digital hearing Aids

B.EARMOULDS:

B1 Types of moulds and uses

B2 impression material

B3 impression technique

B4 Resonance in tubes

B5 Damping and acoustic filters

B6 Effect of venting

B7 Sound Leakage

B8 Acoustic feedback

B9 selection of ear mould features

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1. Textbook of Ear, Nose and Throat Diseases 12th Edition by [Mohammad Maqbool](#) (Editor), [Suhail Maqbool](#) (Editor), [Suresh C. Sharma](#) (Foreword)
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Reviewed by Jerry L. Northern, PhD, Professor Emeritus, University of Colorado School of Medicine Department of Otolaryngology (Audiology), Denver, CO.
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