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MM-1962

Sl. No. 0046

Total No. of Pages : 2

III Semester M.Sc. Examination, February - 2025

(Scheme : CBCS)

AUDIOLOGY

**Implantable devices for individuals with hearing
impairment**

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

1) Describe the candidacy criteria for the following :

a) Bone conduction implantable devices [5]

b) Middle ear implants [5]

OR

2) What are the important aspects to be discussed during counselling for using a partial total implantable hearing device. [10]

3) Discuss the behavioural and objective pre-operative evaluation for children and adults in cochleae implantation. [15]

OR

4) Write short notes on the following

a) Contraindication for cochlear implant [5]

b) Pre-operative counselling [5]

c) Role of team-members in cochlear implants. [5]

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- 5) Explain the mapping procedure using various behavioural and objective measures. [15]

OR

- 6) What are the post-operative counselling considerations in cochlear implants?[15]
7) Explain the candidacy criteria for auditory brainstem implants and auditory midbrain implants. [10]

OR

- 8) Discuss the components of ABI and AMI and mention its function. [10]



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MM-1963

Sl. No. 0054

Total No. of Pages : 2

III Semester M.Sc. Examination, February - 2025

(Scheme : CBCS)

AUDIOLOGY

Speech Perception

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- 1) Explain the following regarding the 'Reverse hierarchy theory': [3 × 5 = 15]
 - a) Why is it not considered an active theory of speech perception?
 - b) How does it account for speech normalisation?
 - c) According to the theory what is the difference between Conscious perception and Implicit perception?

OR

- 2) Write notes on normalisation of speech. [15]
- 3) Describe the role of formants in the perception of speech sounds. [10]

OR

- 4) What are the cues used to perceive voiced / unvoiced fricatives and affricates? [15]
- 5) Describe how coarticulated cues help in the perception of stop place and voicing [15]

OR

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- 6) a) Which technique would you choose to study the following: [5]
- i) Importance of F2 transition in the perception of place of articulation of stops.
 - ii) Importance of VOT in the perception of voiced-unvoiced stops.
- b) Justify the above choice of techniques. [10]
- 7) Write notes on stimulus parameters that affect dichotic speech perception [10]

OR

- 8) Which is the best way to study infant speech perception? Justify your answer. [10]



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MM-1964

Sl. No. 0044

Total No. of Pages : 2

III Semester II Year M.Sc. Examination, February - 2025

(Scheme : CBCS)

AUDIOLOGY

Seminars in Assessment of Hearing Impairment

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- I. 1.** Describe the importance of immittance evaluation for the differential diagnosis of various conductive pathologies. **[15]**

OR

- 2.** Discuss the audiological findings and its histopathological correlate of Middle Ear Effusion. **[15]**

- II. 3.** Discuss the audiological test battery approach to be utilized for the differential diagnosis of various cochlear and retrocochlear pathologies. **[15]**

OR

- 4.** Discuss the audiological findings and its histopathological correlate of auditory neuropathy. **[15]**

- III. 5.** Describe the modifications required in the audiological assessment for a deaf and blind child. **[10]**

OR

- 6.** Write short notes on :
- a)** Behavioural audiological evaluation of hyperacusis. **[5]**
 - b)** Models to explain the origin of tinnitus. **[5]**

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- IV. 7. Discuss the various audiological and non-audiological tests for identifying genetic hearing loss. [10]

OR

8. Write short notes on :

- a) Importance of CT scans in audiology. [5]
- b) Genetic counselling [5]

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Sl. No. 0060

Total No. of Pages : 2

III Semester M.Sc. Examination, February - 2025

(Scheme : CBCS)

AUDIOLOGY

Seminars in Rehabilitative Audiology

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- I. 1. Explain the different speech cue enhancement techniques used in hearing aids. [10]

OR

2. a) What are the techniques to improve compatibility of hearing aids with mobile Phones. ? [5]
b) How can stereolithography be used in preparation of ear molds? [5]

- II. 3. a) What are the factors that effect the selection of a hearing aid.? [10]
b) What are the ways of managing individuals with cochlear dead regions.? [5]

OR

4. Elucidate the procedure involved in the verification of hearing aid using insertion gain measurements. [15]

- III. 5. a) How would you counsel a ^{ive}name hearing aid user regarding adjusting to hearing device? [5]
b) Explain few computer based programs for aural rehabilitation. [5]
c) How would you troubleshoot a hearing aid if the output from it is noisy? [5]

OR

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6. a) How do you measure outcome of therapy for pediatric population? [10]

b) List a few communication strategies that can be used by an adult with hearing loss. [5]

IV. 7. Describe the Tinnitus Retracing Therapy. [10]

OR

8. Elaborate on the audiological management of hyperacusis. [10]

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MM-1966

Sl. No. 0039

Total No. of Pages : 2

III Semester M.Sc. Examination, February - 2025

(Scheme : CBCS)

AUDIOLOGY

Vestibular System : Assessment & Management

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all the questions.

I. 1) Write the anatomy and physiology of peripheral vestibular system. [10]

OR

2) Explain the role of central vestibular system in balance. [10]

II. 3) Describe the different behavioural tests that assesses the vestibular system and cerebellar system. [10]

OR

4) Write the importance of case history and questionnaires for quality of life assessment in individuals with various vestibular disorders. [10]

III. 5) Describe the VEMP findings in individuals with various peripheral vestibular disorders. [15]

OR

6) Write a note on vestibular findings and its pathophysiological correlates in individuals with vestibular schwannomas. [15]

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- IV. 7) a) Describe the various repositioning manuevers for lateral canal BPPV. [10]
b) Describe the Brandt-Daroff exercises. [5]

OR

- 8) a) Describe the different vestibular rehabilitation procedures for children with vestibular disorders. [10]
b) Wrtie a note on Epley manuever. [5]



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MM-1967

Sl. No. 0059

Total No. of Pages : 2

III Semester M.Sc. Examination, February - 2025

(Scheme : CBCS)

AUDIOLOGY/SPEECH-LANGUAGE PATHOLOGY

Technology for Speech-Language and Hearing

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all Questions.

UNIT - I

- 1) Describe the working principle of receiver in hearing aids with a diagram. [10]

OR

- 2) a) What are the significant characteristics of microphones used for measurement? Explain. [5]
b) What are the essential requirements for mains power supply in a clinical setup regarding electrical grounding. [5]

UNIT - II

- 3) a) Explain the process of converting an analog signal to a digital signal using ADC. [10]
b) "Would you prefer on FIR over an IIR filter for speech signal filtering? Explain. [5]

OR

- 4) Explain the basic structure of a computer network and the roles of routers, switches & nodes in computer networking. [15]

P.T.O.

UNIT - III

- 5) a) With a block-diagram illustrate the technology used for cepstrum analysis. [5]
b) How is Zero Crossing Rate (ZCR) estimated from speech waveforms & how is it used to differentiate voiced & unvoiced sounds. [5]
c) Illustrate technology used in a speech to text conversion system. [5]

OR

- 6) a) Explain n-of-m strategy of speech processing in cochlear implants. [5]
b) Using a block diagram explain the differences between a fully digital hearing aid & a digitally controlled analog hearing aid. [10]

UNIT - IV

- 7) a) Explain the technology with which a fibre optic endoscope capture the movement of vocal folds. [5]
b) Explain the technology involved in the operation of a DPOAE analyzer. [3]
c) How is click stimulus is generated from an electrical pulses? [2]

OR

- 8) What factors make MRI most effective imaging technique. Explain the principle of operation. [10]

