AC 010

III Semester M.Sc. Examination, December 2005
Audiology
Psychophysics of Audiation in the Hearing Impaired

Time: 3 Hours , Max. Marks: 80

Instruction: *Answer ALL the questions.*

I. 1. Describe any two adaptive test procedures used clinically, 16

OR

2. Critically evaluate Florentinis model of loudness perception. **16**

II. 3. Write a note on:

a) Perception of pitch of pure tones in hearing impaired. 10

b) Frequency discrimination. **6**

OR

4. Write a note on pitch discrimination of Complex tones. 16

III. 5. a) What is the effect of NIHL on gap detection ? 8

b) Write a note on Brief tone Audiometry in hearing impaired. **8**

OR

6. Write a note on:

a) Temporal integration. 8

b) Auditory filter width and gap detection. 8

IV. 7. a) Write an essay on dead regions in the cochlea and their effects on psychophysical tuning curves. 12

b) What is the implication of dead regions of cochlea in hearing aid fitment ? *4*

8. Write a note on tuning curves obtained with simultaneous and non-simultaneous marking in hearing impaired. 16

V. 9. Discuss the factors affecting Localization in Sensorinormal hearing loss. 16

OR

10. a) What is the importance of binomial amplification for the elderly ? 8

b) Write a note on MLD in Sensorinormal hearing loss. 8

AC 020

III Semester M.Sc. Examination, December 2005
Audiology
Seminars in Assessment of the Hearing Impaired

Time: 3 Hours **Max. Marks: 80**

Instruction: *ALL units are COMPULSORY.*

I. 1. a) Elaborate on the genetic basis of non-syhdromic hearing loss. Supplement your answer with relevant research findings. 10

b) Write briefly on the genetic evaluation and counseling of hearing impaired. 6

OR

2. Describe the genetic syndromes associated with hearing impairment. 16

II. 3. a) Describe the characteristics and audiological evaluation in cases of auditory neuropathy. 8

b) Add a note on neurophysiological basis of auditory neuropathy. 8

OR

4. Discuss the recent concepts and research pertaining to the evaluation and management of sudden hearing loss. 16

III. 5. a) List the audiometric variables that one would encounter in the evaluation of difficult-to-test-population. 6

b) Comment on the types of hearing impairment found among the C.P. population and the considerations in diagnostic testing. 10

OR

6. a) Compare and contrast hyperacusis and recruitment. 6

b) Write a note on management of individuals with hyperacusis. 10

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IV. 7. a) Describe any one vestibular disorder in terms of causes, characteristics, diagnosis and management. 10

b) Write briefly on the vestibular testing in young children. 6

OR

8. Describe the pathophysiology, generation and role of neuroplasticity in tinnitus. 16

V. 9. a) Elaborate on the background, general principles of Functional Magnetic Resonance imaging and its clinical implications. 10

b) Discuss the applications of non-audiological tests in hearing impaired. 6

OR

10. Discuss the basics behind electrical fields, magnetic fields, imaging, brain maps and their clinical applications in auditory disorders. 16

AC 030

III Semester M.Sc. Examination, December 2005
Audiology
Speech Perception in the Clinical Population

Time: 3 Hours Max. Marks; 80

Instruction: *Answer ALL the questions.*

I. 1. Discuss the cues used by the hearing impaired in perceiving place of articulation. **16marks**

OR

2. Write notes on perception of stress by the hearing impaired. **16 marks**

II. 3. a) Perception through a multi channel tactile device can compensate for loss in auditory perception. Comment. **8 marks**

b) Discuss suprasegmental perception through the tactile modality. **8 marks**

4. A top-down process is a better method for visual perception than the bottom-up process. Comment. **16 marks**

III. 5. Which cochlear implant and strategy would you recommend? Substantiate your choice with based on speech perception information data from research. **16 marks**

OR

6. Discuss the perception of segmental cues across different cochlear implants which make use of a common speech coding strategy. **16 marks**

IV. 7. a) Highlight the advantages of objective methods of evaluating speech intelligibility over subjective methods. **8 marks**

b) Which articulation index method gives a good indication of a person's speech intelligibility? Justify your choice. **8 marks**

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8. Write a note on the applications of objective measures of speech intelligibility in the field of speech and hearing. **16 marks**

V. 9. Write notes on the impact of different signal-to-noise ratios in the perception of speech in normal and hearing impaired individuals. **16 marks**

10. What measures would you employ to overcome the negative effect of adverse listening conditions in the perception of speech by the hearing impaired ? 16 **marks**

AC 040

III Semester M.Sc. Examination, December 2005
Audiology
Electrophysiological Assessment of the Auditory System

Time: 3 Hours **Max. Marks:80**

Instruction: *Answer ALL the Questions.*

I, 1. Discuss the specifications to be made for development of National/ International standards of instrumentation for recording auditory evoked potential system. 16

2. Discuss the parameters that need to be calibrated[1] in an evoked potential system and briefly outline the procedure for the same. 16

II. 3. An audiologist has recorded ABR from an adult with a complaint of giddiness. However, the results do not match with previous recording carried out in another clinic two days back. How would you explain the difference in results ? 16

OR

4. Write notes on the application of the following in ABR. 8+8
   a) Fsp
   b) Correlation techniques.

III. 5. Compare and contrast AMLR and ALLR recorded from a 60 yr. old and a 25 yr. old subject. Justify the similarities and the differences observed. 16

OR

6. Describe the protocol used for recording AMLR and ALLR and justify the choice of each of the parameters. 16

IV. 7. A 7 year old child with learning disorder needs to be evaluated for auditory processing disorder. Discuss the electrophysiological tests you would carry out on the child and justify the choice of the tests. 16

OR

8. a) Write a note on stimuli used for recording MMN, P 300, N 400 and CNV. 8+8
   b) Write a note on the scalp distribution of MMN and P 300 and its relevance for placement of electrodes in recording these responses.

V. 9. Discuss the factors affecting recording of ASSR. 16

OR

10. In a 2 yr.old child, ABR for clicks were absent at maximum intensity level, but ASSR could be recorded at 100 dB HL for 500 Hz signal and at 120 dB HL for 4000 Hz signal. What is your interpretation ? Justify your answer. 16

AC 050

III Semester **M.Sc.** Examination, **December 2005**

Audiology

Audioiogy in Practice

Time: 3 Hours

Instruction: *Answer ALL the Questions.*

I. 1. What facilities are presently available in rural/tribal area for rehabilitation of a hearing impaired ? What needs to be done to improve the facilities ? 16

OR

2, a) What precautions would you exercise while screening hearing of school children ? 4

b) Write a protocol for screening hearing and follow-up of school-going children. 12

II. 3. Elaborate on the role of an audiologist in a neurological set-up. 16

OR

4. Discuss the role of an audiologist in the evaluation and rehabilitation of a hearing impaired in a paediatric set-up and an otorhinolaryngological set-up. 16

III. 5. What measures can an audiologist take in the prevention and management of hearing loss in industrial employees ? 16

OR

6. a) Write a note on the protocol that can be utilised to evaluate and rehabilitate an individual with noise induced hearing loss. 8

b) What precautions shall be considered while evaluating hearing for compensatory claims ? 8

IV. 7. Write a note on the expertise/skills required of an audiologist in medico-legal aspects. 16

OR

8. a) Write a note on: 8

i) Direct examination,

ii) Cross examination.

b) Discuss the ethical principles to be followed by an audiologists. 8

V. 9 In what ways can a barrier-free environment be created for hearing impaired individuals ? 16

OR

10. Mention the standard requirements for: ***16***

a) test environment.

b) ear protective devices.

What modifications are required with regard to these two aspects ?