

AC 010

**III Semester M.Sc. Examination, December 2006  
(Scheme : Semester)**

**Audiology  
Psychophysics of Audition in the Hearing Impaired**

Time : 3 Hours

Max. Marks : 80

*Instruction: Answer all questions as directed.*

Unit - L I ) Discuss the application of studying the presence of recruitment and limited dynamic range in individuals with hearing impairment. 16

OR

2) a) Which would be the most appropriate adaptive procedure while testing individuals with severe to profound hearing loss ? Justify your choice. 10

b) What would be the differences in these adaptive procedures while testing normal hearing and individuals with hearing impairment ? 6

Unit - II. 3) a) Pitch perception is known to be deirant in individuals with hearing impairment. Discuss the factors that affect pitch perception in this population. 8

b) Mention how pitch perception is affected with respect to each of the factors mentioned under (a) above. 8

OR

4) a) Discuss how pitch perception varies as a function of degree of hearing loss. 6

b) What are the implications of knowing the above information? 10

Unit - III. 5) Write notes on the following in individuals with sensori-neural hearing loss.- 4x4

- a) Gap detection
- b) Temporal integration
- c) Temporal order
- d) Rate discrimination.

OR

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- 6) a) What is auditory numerosity ? 4  
b) How would variations in differential sensitivity for duration affect perception in individuals with hearing impairment in a real-life situation? 12

Unit - IV. 7) a) Define the following :

- i) Forward masking 2  
ii) Backward masking. 2  
iii) Central masking 2  
iv) Temporal masking. 2

- b) Describe briefly ways in which each of the above can be tested in individuals with hearing impairment. 8

OR

- 8) Write note on the effect of different types of masking as a function of type and degree of hearing impairment. 16

- JJnit-V. 9) a) How is DL for frequency and intensity different in normal hearing and individuals with severe hearing impairment ? 8  
b) How would this information be useful in the management of individuals with hearing impairment ? 8

OR

- 10) a) Those with a profound hearing loss or asymmetrical hearing loss get minimal benefit from binaural hearing. Discuss. 10  
b) How would you measure binaural hearing in individuals with asymmetrical hearing loss ?

**AC 020**

**III Semester M.Sc. Examination, December 2006**  
**Audiology**  
**Seminars in Assessment of the Hearing Impaired**

Time : 3 Hours

Max. Marks : 80

*Instructions : All units are compulsory.*

**UNIT-I**

1. a) List the audiological findings commonly seen in the various conditions causing conductive hearing loss. 8
- b) Comment on the role of immittance OAE and ABR in the assessment of conductive hearing loss. 8

**OR**

2. a) Discuss the need for identifying genetic hearing loss. 10
- b) Write on the role of connexin in hearing. 6

**UNIT-II**

3. Describe the audiological and histopathological finding in systemic diseases. 16
- OR**
4. Write briefly on
    - a) Idiopathic sudden sensorineural hearing loss. 8
    - b) Hereditary hearing impirement. 8

**UNIT - III**

5. a) Discuss the problems that one could encounter while testing the hearing of children who are deaf-blind, antistic & C Down's syndrome. 8
  - b) How can you overcome these problems while testing these children ? 8
- OR**
6. Discuss the recent studies on hyperaensis relevant to the tests , interpretation and management. 16

**P.T.O.**

UNIT - IV

7. a) Compare the efficiency of caloric tests Vs ENG in the evaluation of vestibular disorders. 12
- b) What components would comprise of a detailed vestibular system assessment? 4

OR

8. a) Describe the types of tinnitus clinically encountered. 10
- b) Relate the role of non classical pathways in the generation of tinnitus. 6

UNIT-V

9. a) Discuss the role of lab tests in the differential diagnosis of auditory disorders. 8
- b) "Non audiological tests complement the audiological tests in the diagnosis of auditory disorders". Discuss. 8

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III Semester M.Sc. Examination, December 2006  
(Semester Scheme)

Audioiology

Electrophysiological Assessment of the Auditory System

Time : 3 Hours

Max. Marks : 80

*Instruction : Answer all the questions.*

- I. 1) Compare and contrast the techniques used for recording ABR and ASSR, 16  
OR  
2) Discuss the generators of the potentials. (4x4)  
a) P<sub>300</sub>  
b) MMN  
c) ALLR  
d) AMLR.
- II. 3) Describe the test protocol you would choose to record ABR from a neonate.  
Justify the choice of your protocol. (8+8)  
4) a) ABR of a 40 yr. old-female shows a prominent peak at a latency of 5-8  
m/sec flow. Would you confirm whether it is V peak of ABR ? 8  
b) ABR recorded from a 25yr old adult with mild hearing loss shows only  
VII and V peak. How can you enhance I peak in his recording ? 8
- III. 5) Discuss the factors related to subject affecting AMLR and ALLR. 16  
OR  
6) Discuss the usefulness of ALLR in diagnosis and rehabilitation of auditory  
disorders. 16
- IV. 7) Compare and contrast the test protocol used for recording P<sub>300</sub> and MMN. 16  
OR  
8) Describe the endogenous potentials that can be recorded from the auditory  
nervous system and the stimuli used to elicit each of them. 16

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- V. 9) a) Write a note on stimuli used for recording ASSR. 10  
b) Discuss the clinical applications of ASSR. 6

OR

- 10) a) Compare the clinical utility of tone burst ABR and ASSR with evidence from literature. 8  
b) Compare the clinical utility of single frequency ASSR and MASTER with evidence from literature. 8

III Semester **M.Sc.** Examination, December 2006  
(Semester Scheme)  
Audiology  
Seminars in Rehabilitative **Audiology**

Time: 3 Hours

Max. Marks: 80

*Instructions: 1) Answer all questions.*

*2) All questions carry equal marks.*

1. 1. a) Discuss various ways of signal enhancement in a hearing device. 10  
b) What factors can be manipulated in a hearing aid to keep all the sounds audible and yet comfortable ? 6
- OR
2. a) Discuss different methods of feedback reduction in a hearing aid. 10  
b) How can electro-magnetic interference in a hearing aid, while using a mobile phone, be reduced ? 6
- II. 3. a) What modifications can be suggested for electro acoustic measurement of a hearing aid in a telecoil mode, over that in IS : 10776, 1984 standard document. 10  
b) Why should group delay parameter in a hearing aid be measured ? 6
4. a) How is electroacoustic evaluation of an FM device different from that of a hearing aid? 8  
b) Write a note on type of signal/signals used for electroacoustic measurement. 8
- III. 5. a) Write the rationale of any two procedures for selecting linear hearing aids and two procedures for selecting non-linear hearing aids. 8  
b) How is counselling an ALD user different from a hearing aid user ? 8

OR

P.T.O.

6. a) Describe the procedure for selecting an FM hearing device for an individual with hearing loss. 8
- b) Discuss the future needs in hearing aid fitting.

- IV. 7. a) "Objective measures of hearing and hearing aid evaluation facilitate early intervention". Evaluate the statement. 10
- b) Write notes on Indian legislation for education of a child with hearing loss. 6

OR

8. a) Describe language training in different age groups of children with hearing loss. 10
- b) Write notes on management of deaf-blind. 6

- V. 9. a) What audiological strategies alleviate tinnitus in an individual ? Which strategy is popular now and why ? 10
- b) Write a note on hair cell regeneration. 6

OR

10. a) An individual comes to you with a complaint of intolerance to normal environmental sounds. What management techniques can you suggest ? Describe them. 8
- b) Gene therapy for hearing loss is the solution for all individuals with hearing impairment. Discuss. 8