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Total No. of Pages : 2

III Semester M.Sc. (AUD) Examination, April - 2023
(Scheme : CBCS)
AUDIOLOGY
Implantable Devices for Individuals with HI

Time : 2 Hours

Max. Marks : 50

Instruction :   *Answer all questions.*

I.   1.   What measures/precautions need to be taken when deciding about bone conduction implants for children? **[10]**

OR

2.   a)   Justify measuring speech recognition thresholds rather than speech identification when evaluating the utility of middle ear implants. **[5]**

b)   Briefly describe the other audiological tests that could be done to indicate the usefulness of bone conduction implants. **[5]**

II.   3.   a)   Mention the conditions when optimization of devices is required in individuals using cochlear implants, giving the reasons for doing so. **[10]**

b)   Briefly describe how optimization should be done. **[5]**

OR

4.   When will you advise the use of the following for a child :

a)   Unilateral cochlear implants **[3]**

b)   Bilateral cochlear implants **[4]**

c)   Bimodal cochlear implants **[4]**

d)   Electroacoustic cochlear implants **[4]**

III. 5. Describe the changes that need to be done in map parameters for the following :

     a)   Partial insertion of electrodes   **[5]**

     b)   Thin 8th nerve   **[5]**

     c)   Small electrical dynamic range   **[5]**

<div align="center">OR</div>

     6.   a)   Write notes on how objective measures can be used to set map parameters in cochlear implants.   **[10]**

           b)   What is the impact of stimulus artifact when carrying out specific objective measures?   **[5]**

IV. 7. Describe the audiological and non-audiological criteria when deciding about brainstem implants for a client.   **[10]**

<div align="center">OR</div>

     8.   Write notes on mid-brain implants, with specific mention of candidacy. **[10]**

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Total No. of Pages : 1

III Semester M.Sc. Examination, April - 2023
(Scheme : CBCS)
AUDIOLOGY
Speech Perception

Time : 2 Hours   **Max. Marks : 50**

Instruction :   Answer all questions.

1.   What is categorical perception? Give evidences for categorical perception of consonants.   **[15]**

OR

2.   In detail, describe the coding of vowels in auditory nerve and brainstem. **[15]**

3.   Describe the important cues for the perception of fricatives, affricates & nasals.   **[15]**

OR

4.   Discuss the major cues for the perception of place of articulation of stop consonants.   **[15]**

5.   Critically evaluate any two methods to study speech perception.   **[10]**

OR

6.   Discuss the important cues in the perception of suprasegmentals.   **[10]**

7.   Describe different techniques that can be used to study perception of speech in infants.   **[10]**

OR

8.   Discuss the role of short term memory in perception of speech.   **[10]**

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Sl. No. 0046

Total No. of Pages : 1

III Semester M.Sc. (AUD) Examination, April - 2023
(Scheme : CBCS)
AUDIOLOGY
Seminars in Assessment of Hearing Impairment

Time : 2 Hours   **Max. Marks : 50**

Instruction : Answer all questions.

1. Describe the relation between audiological and histopathological findings in diseases related to Pinna and External Auditory canal.   **[10]**

OR

2. Justify the role of immittance in the differential diagnosis of various middle ear disorders.   **[10]**

3. Describe the test battery required for the diagnosis of Auditory Neuropathy spectrum disorder.   **[15]**

OR

4. Describe the correlation of audiological findings to its histopathological correlates in individuals with sudden hearing loss.   **[15]**

5. Discuss the importance of tinnitus evaluation and its implication for rehabilitation.   **[10]**

OR

6. Write short note on :
   a) Audiological Evaluation in deaf-blind   **[5]**
   b) Conditions causing hyperacusis   **[5]**

7. Justify the importance of non-audiological tests in the assessment of hearing disorders.   **[15]**

OR

8. Write short notes on :
   a) Amniocentesis   **[5]**
   b) Genetic counselling   **[5]**
   c) Gene mapping   **[5]**

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Sl. No. 0045

Total No. of Pages : 1

III Semester M.Sc. Examination, April - 2023
(Scheme : CBCS)
AUDIOLOGY
Seminars in Rehabilitative Audiology

Time : 2 Hours   **Max. Marks : 50**

Instruction :   *Answer all questions.*

I.   1.   What are the differences between compression and expansion?   **[10]**

OR

2.   What are the different variables affecting Electroacoustic measurements.

[10]

II.   3.   How do you fit a hearing aid using objective measurements?   **[15]**

OR

4.   Write a short note on selection, verification and validation of hearing aid fitting.   **[15]**

III.   5.   What are the various factors that affect speech reading training for children and older adults?   **[15]**

OR

6.   Write a short note on :   **[15]**

a)   Troubleshooting of hearing aids

b)   Optimization of hearing aids

IV.   7.   What are the features in hearing aids that are manipulated for a Person with tinnitus?   **[10]**

OR

8.   Write a short note on management of hyperacusis.   **[10]**

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III Semester II Year M.Sc. Examination, April - 2023
(Scheme : CBCS)
AUDIOLOGY
Vestibular System : Assessment and Management

Time : 2 Hours   **Max. Marks : 50**

Instruction :   All questions are compulsory. Draw diagram wherever necessary.

1. With a neat diagram, explain the physiology of the utricle and the saccule.
                                                                            [10]

OR

2. What are vestibulospinal tracts? Explain the origin course and insertion of medial and lateral vestibule-spinal tracts with a neat diagram.   **[10]**

3. Explain the procedure of any three behavioral tests for the diagnosis of vestibular disorders.   **[15]**

OR

4. Write the protocol, waveform analysis and factors affecting cervical and ocular vestibular evoked myogenic potentials.   **[15]**

5. Write short notes on :   **[3 × 5 = 15]**

    a) Superior semicircular canal dehiscence syndrome

    b) BPPV

    c) Age related degeneration in vestibular functioning

OR

6. Write short notes on :   **[3 × 5 = 15]**

    a) Vestibular neuritis

    b) Vestibular schwannoma

    c) Vestibular disorders in children

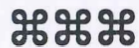7. Differentiate between the procedures involved in the management of unilateral vs. bilateral vestibular pathologies.   **[10]**

                                   OR

8. Explain the procedure of administering any two maneuvers for the management of BPPV?   **[10]**

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Sl.No. 0004

Total No. of Pages : 2

III Semester M.Sc. (SLP) Examination, April - 2023
(Scheme : CBCS)
AUDIOLOGY
Technology for Speech, Language and Hearing

Time : 2 Hours

Max. Marks : 50

Instruction: Answer all questions.

I. 1. a) Which type of microphone is used in hearing aids? State and explain the significant characteristics of this microphone? **[5]**

    b) Explain the technology of the receivers used in behind the ear hearing aids. **[5]**

<div align="center">OR</div>

2. a) Which are the three classes into which electrical equipments are classified according to the method of protection against electrical shock? Explain the features of each class. **[5]**

    b) Which are the two types of earthing system? Which earthing system is preferred for a BERA equipment? **[5]**

II. 3. a) Explain the criteria with which you decide the number of samples and number of amplitude levels while converting a speech signal to a digital signal. How these parameters influence the closeness of the digital signal to the original speech signal? **[5]**

    b) Which type of decomposition is suitable for digital signal processing of speech signal? Why? **[5]**

<div align="center">OR</div>

4. a) State and explain the tasks performed by operating system in the functioning of a computer. **[5]**

    b) Which type of modulation is used in hearing aid systems used for listening in classroom of children with hearing impairment? Why?

  [5]

P.T.O.

III. 5. a) How is the source filter model of speech production utilized in linear predictive coding? **[5]**

b) Explain how 'Short time energy' helps in deciding whether a speech sample is voiced/unvoiced/silent. **[5]**

c) With a diagram explain the basic principle of a speaker recognition system. **[5]**

OR

6. a) How does the HiRes 120 strategy differ from Fine Structure Processing (FSP) strategy in cochlear implants? **[5]**

b) With a block diagram, illustrate how a two Channel Wide Dynamic range compression is implemented in digital hearing aids. **[5]**

c) How is noise control achieved in hearing aids using two port directional microphone? **[5]**

IV. 7. a) With a diagram of the equipment set up, explain the procedure for measuring reverberation time in an audiometric test room. **[5]**

b) How does a C-arm overcome the limitations of conventional X-ray imaging? **[5]**

c) Explain the basic principle of magnetic resonance imaging (MRI). **[5]**

OR

8. a) With a functional block diagram explain the working principle of Transient Evoked oto-acoustic emission (TEOAE) analyzer. **[5]**

b) Explain the mechanism with which tone burst and click stimuli are generated in a BERA instrument. **[5]**

c) How does an electromagnetic articulograph trace the movement of articulators during speech production? **[5]**

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