[KZ 0811] **AUGUST 2011** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Define digital signal processing and explain its application on hearing aids.
2. Explain different types of group amplification systems with advantages and disadvantages.
3. Describe the advantages and disadvantages of binaural vs. monaural fitting.

II. Write notes on: **(8 x 5 = 40)**

1. Different types of Ear Mould.
2. Artificial ear and artificial mastoid.
3. Tips to facilitate acceptance of hearing aids.
4. Linear and digital integrated circuits.
5. Dynamic Range.
6. Trouble shooting of hearing aids.
7. Receiver and cords.
8. Counseling for geriatric population.

III. Short Answers on: **(10 x 3 = 30)**

1. AVT.
2. Unidirectional microphones.
3. Sound Level Meter.
4. Pseudo binaural hearing.
5. CROS.
6. Batteries used in hearing aids.
7. BAHA.
8. Cued Speech.
9. BTE loops.
10. IR System.

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[LA 0212] **FEBRUARY 2012** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. How do you counsel the geriatric regarding the hearing aid use and maintenance?
2. Discuss the various educational placement for the hearing impaired.
3. Discuss the rationale for early rehabilitation for the child with Hearing impaired.

II. Write notes on: **(8 x 5 = 40)**

1. List the advantages of the in The Canal over Completely in the Canal hearing aids.
2. List the various function of ear mould.
3. How to you counsel the client to maximize the battery life.
4. What are function of damper and venting in the hearing aid output?
5. How do you reduce the reverberation in the class room.
6. Explain and give an examples for the modular and custom made hearing aids.
7. How do you trouble shoot when the hearing aid is not working.
8. How do you modify Johan Tracey program for auditory training?

III. Short Answers on: **(10 x 3 = 30)**

1. Custom hearing aids.
2. EAC.
3. Channel allocation in FM.
4. RCI.
5. John Tracey program.
6. Directional hearing aids.
7. Dual Microphone.
8. Sensitivity period.
9. Stetho clip.
10. Ear mould.

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[LB 0212] **AUGUST 2012** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions in the same order.

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Write in detail about various components of a hearing aid.	7	20 min.	10
2. Elaborate on standard ear impression techniques.	7	20 min.	10
3. Write about group amplification systems with its advantages and limitations.	7	20 min.	10
II. Write Notes On:			
1. Write a note on digital tape recording.	4	10 min.	5
2. Write about Monaural Vs Binaural amplification.	4	10 min.	5
3. How will you troubleshoot a hearing aid?	4	10 min.	5
4. Elaborate on custom hearing aids.	4	10 min.	5
5. Write about digital signal processing based hearing aids.	4	10 min.	5
6. Discuss about various ear mould modifications.	4	10 min.	5
7. How will you measure different types of sound?	4	10 min.	5
8. Write a note on directional microphone.	4	10 min.	5
III. Short Answers on:			
1. Write about dynamic range.	2	4 min.	3
2. Write a note on push – pull amplifier.	2	4 min.	3
3. What is direct and alternating current?	2	4 min.	3
4. Write a note on CROS hearing aids.	2	4 min.	3
5. What is a telecoil and list its use.	2	4 min.	3
6. What is artificial ear?	2	4 min.	3
7. Write about Helmholtz resonance.	2	4 min.	3
8. Why is occlusion effect most noticeable for the "ee" and "oo" vowels?	2	4 min.	3
9. Define Sound pressure level.	2	4 min.	3
10. Write briefly about solar charger.	2	4 min.	3

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[LC 0212] **FEBRUARY 2013** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Write in detail about different types of hearing aids, listing its limitations and advantages.
2. Elaborate on standard ear impression techniques.
3. Write in detail about different varieties of output amplifies used in hearing aids.

II. Write notes on: **(8 x 5 = 40)**

1. What are the medical related contraindications to hearing aid fitting.
2. Write about recording and reproduction of sound.
3. Write a note on integrated sound level meter.
4. List the basic elements of a hearing aid and discuss its functions.
5. Write about solar charger and its specifications.
6. What are the important points that you would concentrate while counseling geriatric population?
7. Write a note on directional microphone.
8. Write about digital signal processing and its implementation.

III. Short Answers on: **(10 x 3 = 30)**

1. What is direct and alternating current?
2. Write about dynamic range.
3. What is a filter and mention its function?
4. Define sound Pressure Level.
5. Write a note on CROS hearing aids.
6. Why does the occlusion effect occur?
7. Write about Helmholtz resonance.
8. What is a coupler?
9. Draw the block diagram of push pull amplifier and explain in brief.
10. What is a telecoil and list its use?

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[LD 0212] **AUGUST 2013** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. What are Digital signal processing and its clinical implications?
2. Describe the types of hearing aids and their advantages and limitations.
3. The importance of counselling for users and parents.

II. Write notes on: **(8 x 5 = 40)**

1. What are the basic components of hearing aids?
2. What is a sound level meter?
3. Describe a loudspeaker as a transducer.
4. How will you trouble shoot a hearing aid?
5. What are group amplification systems?
6. What are the types of microphones?
7. What is the procedure of making hard moulds?
8. Write in detail about induction loop system in classrooms.

III. Short Answers on: **(10 x 3 = 30)**

1. What are microcomputers?
2. What are the limitations of In The Canal Hearing Aids?
3. What is a transistor? Mention its function.
4. Differentiate AC Vs BC hearing aids.
5. Write the specifications of solar charger.
6. What are non electrical hearing aids?
7. What is a multimeter?
8. What is the importance magnetic tape recording?
9. Differentiate between Hard and Soft moulds.
10. What is the importance of harness?

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[LE 0212] **FEBRUARY 2014** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Elaborate on standard ear impression techniques.
2. Write in detail about various components of a hearing aid.
3. Write about group amplification systems with its advantages and limitations.

II. Write notes on: **(8 x 5 = 40)**

1. Discuss about various ear mould modifications.
2. Write about Monaural Vs Binaural amplification.
3. Write about digital signal processing based hearing aids.
4. Write a note on digital tape recording.
5. How will you measure different types of sound?
6. Elaborate on custom hearing aids.
7. How will you troubleshoot a hearing aid?
8. Write a note on directional microphone.

III. Short Answers on: **(10 x 3 = 30)**

1. Define Sound pressure level.
2. What is direct and alternating current?
3. What is artificial ear?
4. Write a note on CROS hearing aids.
5. What is a telecoil and list its use.
6. Write briefly about solar charger.
7. Write about Helmholtz resonance.
8. Write about dynamic range.
9. Write a note on push – pull amplifier.
10. Why is occlusion effect most noticeable for the “ee” and “oo” vowels?

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[LF 0212] **AUGUST 2014** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Digital Signal Processing and its applications.
2. Working of various types of microphone.
3. What is ear mold? Write its uses and classification with neat diagrams.

II. Write notes on: **(8 x 5 = 40)**

1. What are Baffles and Enclosures?
2. How and what would you counsel a parent of a hearing impaired child?
3. Benefits of binaural fitting over monaural hearing aid fitting. Justify.
4. What is Sound Level Meter and list the functions?
5. What are Artificial Ear and Artificial Mastoid?
6. Explain about BAHA.
7. Explain the working of FM system and its advantages and disadvantages.
8. Classify the hearing aids based on the technology used.

III. Short Answers on: **(10 x 3 = 30)**

1. What is electro magnetic induction?
2. Pseudo binaural vs binaural fitting.
3. What are the various cords used along with the body level aid?
4. Venting and its types.
5. What are Diodes?
6. Explain Ohm’s law.
7. What are Dampers and the types?
8. Write about Tweeters and horns.
9. Explain Bias and equalization.
10. Tape speed.

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[LG 0215] **FEBRUARY 2015** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. What are the various components in a hearing aid?
2. Group amplification systems used in classroom of a hearing impaired.
3. Classify and explain the ear level hearing aids.

II. Write notes on: **(8 x 5 = 40)**

1. Troubleshooting of hearing aids.
2. What is amplifier and what are the different classes of amplifiers used in hearing aids?
3. Difference between AC and DC.
4. Explain Sampling and Quantization.
5. What is frequency counter and sine wave generator?
6. Steps involved in ear mold impression.
7. Magnetic tape recording.
8. Historical development of hearing aids.

III. Short Answers on: **(10 x 3 = 30)**

1. Integrated sound level meter.
2. DC power supply.
3. Various input to hearing aids.
4. Parts of a Microcomputer.
5. What is Automatic Gain Control?
6. Explain Differential amplifier/ amplification.
7. What are the ways to reduce the aliasing error during sampling?
8. What is External and internal delay?
9. Attack time and release time of a hearing aid.
10. Explain about the multispeaker system.

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[LH 0815] **AUGUST 2015** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Basic concept of digital signal processing & its implementation in aural rehabilitation.
2. Mention the measuring instruments used in and audiological setup explain elaborately on any four of them.
3. Classify hearing aids according to their types and brief on their advantages and limitations.

II. Write notes on: **(8 x 5 = 40)**

1. Measurement of different types of sound.
2. Parts of hearing aids and their functions.
3. Classroom amplifications devices.
4. Importance of counseling for hearing aids users and parents.
5. Trouble shooting of hearing aids.
6. Solar charger and its specifications.
7. Binaural hearing aids.
8. Counseling regarding maximizing battery life.

III. Short Answers on: **(10 x 3 = 30)**

1. Directional hearing aids
2. Types of ear moulds and criteria for selection of one over the other.
3. Two tips to facilitate acceptance of hearing aids.
4. Importance of harness and BTE loops.
5. Name group amplification system.
6. FM hearing aids.
7. Non electrical hearing aids.
8. Artificial mastoid.
9. Frequency counter.
10. Sound level meter.

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[LI 0216] **FEBRUARY 2016** **Sub. Code: 2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS – I

Q.P. Code: 802304

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Digital signal processing – how does a DSP based system works, applications on DSP based hearing aids?
2. Hearing aids selections and types of hearing aids.
3. Assessment and counseling in geriatric population.

II. Write Notes on: **(8 x 5 = 40)**

1. Monaural VS pseudo binaural hearing aids.
2. Ear moulds and its importance.
3. Non electrical hearing aids.
4. Hearing aid test box and measurement of hearing aids.
5. FM amplifications system.
6. Digital noise reductions.
7. Micro computers and computers.
8. Linear and non linear amplifiers.

III. Short Answers on: **(10 x 3 = 30)**

1. DC power supplier.
2. Voltage stabilizer.
3. Loud speaker efficiency.
4. Structure of a dynamic loudspeaker.
5. Magnetic tape recording and playback.
6. Integrated sound level meter.
7. AC and BC hearing aids.
8. Solar charger and its specifications.
9. Receiver cords.
10. Amplifier power and distortion.

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[LJ 0816] AUGUST 2016 **Sub. Code :2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY
FIRST YEAR
PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS I

Q.P. Code: 802304

Time: Three hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Digital Signal Processing and its applications.
2. Working of Cathode Ray Oscilloscopes with a neat diagram.
3. Group amplification systems used in classroom of a hearing impaired.

II. Write notes on: **(8 x 5 = 40)**

1. Troubleshooting of BTE hearing aids.
2. Working of Automatic Gain control circuit.
3. Difference between AC and DC.
4. Explain Sampling and Quantization.
5. What is frequency counter and sine wave generator?
6. Steps involved in ear mold impression.
7. Magnetic tape recording.
8. Historical development of hearing aids.

III. Short answers on: **(10 x 3 = 30)**

1. Integrated sound level meter.
2. DC power supply.
3. Total Harmonic Distortion (THD).
4. Parts of a coupler.
5. What is Automatic Gain Control?
6. Explain Differential amplifier/amplification.
7. What are the ways to reduce the aliasing error during sampling?
8. Working of telecoil.
9. Compression knee point.
10. Explain about horn speaker.

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[LK 0217] FEBRUARY 2017 **Sub. Code :2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS I

Q.P. Code: 802304

Time: Three hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Working of various types of microphone.
2. What is ear mold, uses and classification with neat diagrams?
3. Classify and explain the ear level hearing aids.

II. Write notes on: **(8 x 5 = 40)**

1. Explain the loudspeaker characteristics.
2. How and what would you counsel a parent of a hearing impaired child?
3. Benefits of binaural fitting over monaural hearing aid fitting. Justify.
4. What is Sound Level Meter and list the functions?
5. What are couplers? Explain the different types of couplers with neat diagram.
6. What are the applications of Digital Signal Processing?
7. Explain the working of infrared system and its advantages and disadvantages.
8. Working of Cathode Ray Oscilloscope.

III. Short answers on: **(10 x 3 = 30)**

1. Pseuodobinaural vs binaural fitting.
2. What are the various cords used along with the body level aid.
3. Horning and its types.
4. What are amplifiers? List the types of amplifiers.
5. What is electromagnetic induction?
6. Criteria for BAHA fitting.
7. What are Dampers and the types?
8. Write about multi speaker system.
9. Explain tape noise.
10. Solar charger.

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[LL 0817] AUGUST 2017 **Sub. Code :2304**

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS I

Q.P. Code: 802304

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Digital signal processing and its applications.
2. Working of Cathode Ray Oscilloscope with a neat diagram.
3. Classify hearing aids according to their types and brief on their advantages and disadvantages.

II. Write notes on: **(8 x 5 = 40)**

1. Magnetic tape recording.
2. Historical development of hearing aids.
3. Discuss about various ear mould modifications.
4. Difference between Alternate and direct current.
5. What are coupler and explain different types of coupler.
6. FM Amplifications system.
7. What are the types of microphone?
8. What is vent? Write about its uses.

III. Short answers on: **(10 x 3 = 30)**

1. What are active and passive components of the circuit with examples?
2. What is multimeter?
3. What are microcomputers?
4. Write note on CROS hearing aids.
5. Pseudo binaural hearing aid.
6. What is transistor and mention its function?
7. Differentiate between hard and soft moulds.
8. What is artificial ear?
9. Parts of the hearing aid.
10. What is Electromagnetic induction?

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[LM 0218] FEBRUARY 2018 **Sub. Code: 2304**

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS I

Q.P. Code: 802304

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Differentiate Direct and Alternate current.
2. Elaborate on procedure involved in taking ear impression.
3. Explain different types of group amplification system with advantages and disadvantages.

II. Write notes on: **(8 x 5 = 40)**

1. Explain sampling and Quantization.
2. Historical development of hearing aids.
3. What is sound level meter? Mention its functions.
4. Microcomputers and computers.
5. Trouble shooting of hearing aids.
6. Artificial Ear and Artificial Mastoid.
7. Write a note on Hearing aid test box.
8. Magnetic tape recording.

III. Short answers on: **(10 x 3 = 30)**

1. What are diodes?
2. Tape speed.
3. Explain about the Multispeaker system.
4. Importance of Harness and BTE loops.
5. Attack time Vs release Time.
6. Explain about Horn Speaker.
7. Explain Tape Noise.
8. Solar charger
9. What is multimeter?
10. What are the ways to reduce the aliasing error during sampling?

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[LN 0818] AUGUST 2018 **Sub. Code: 2304**

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR

PAPER IV – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS I

Q.P. Code: 802304

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Digital signal processing and its applications.
2. Explain different types of group amplification system with advantages and disadvantages.
3. Write in detail about various components of hearing aid with neat diagram.

II. Write notes on: **(8 x 5 = 40)**

1. What are baffles and enclosures?
2. What are the different types of microphone?
3. What is sound level meter and explain?
4. Steps involved in taking ear impression.
5. Trouble shooting of hearing aids.
6. Explain loudspeaker characteristics.
7. Working of cathode ray oscilloscope with neat diagram.
8. Historical development of hearing aids.

III. Short answers on: **(10 x 3 = 30)**

1. What are the ways to reduce the aliasing error during sampling?
2. Compression knee point.
3. Frequency counter.
4. Attack time and release time of a hearing aid.
5. Write about tweeters and horns.
6. What is diode?
7. What is telecoil in the hearing aids?
8. What is the importance of harness?
9. Custom hearing aids.
10. Write about multispeaker system.

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