

SUBJECT : TECHNOLOGY & AMPLIFICATION DEVICES FOR PERSONS WITH HEARING IMPAIRMENT

Day : Thursday
Date : 28/09/2017

W-2017-3438

Time : ~
Max. Marks : 10

N.B.

- 1) Put a in the appropriate box below the question number once only.
- 2) Use blue ball point pen only.
- 3) Each question carries **ONE** marks.
- 4) Student will not be allotted marks if he/she overwrites strikes or put white ink on the cross once marked.
- 5) MCQ sheet will be taken back after half an hour.

SECTION – A

Q.1 M.C.Q.

- 1) Which of the following is not a transducer?
 - a) Microphone
 - b) Loudspeaker
 - c) Resistor
 - d) None of the above
- 2) A filter which allows the frequencies above a cut off frequency is called _____.
 - a) High pass filter
 - b) Band pass filter
 - c) Low pass filter
 - d) All pass filter
- 3) _____ is used in optical recording.
 - a) Needle
 - b) Laser
 - c) Magnetic head
 - d) Capacitor
- 4) Which of the following is not an output device?
 - a) Monitor
 - b) Printer
 - c) Scanner
 - d) Speaker
- 5) Multimeter can measure _____.
 - a) Pressure
 - b) Temperature
 - c) Current
 - d) All of the above

- 6) _____ of following scale is used for validation of hearing aid fitting in children.
- a) APHAB-P
 - b) IT-MAIS
 - c) CHILD
 - d) All of the above
- 7) _____ of following formula is used for programming of nonlinear hearing aid.
- a) NAL-NLI
 - b) DSL i/o
 - c) FIG -6
 - d) All of the above
- 8) _____ is used to improve speech to noise ratio in digital hearing aids.
- a) Directional microphone
 - b) Noise reduction technology
 - c) Both a and b
 - d) None of the above
- 9) During EAC measurement _____ is measured with the volume control on the full of position.
- a) Frequency range
 - b) Total harmonic distortion
 - c) Reference test gain
 - d) SSPL90
- 10) The presence of components in an output signal which are multiples of the input signal frequency is _____ distortion.
- a) Frequency range
 - b) Total harmonic distortion
 - c) Reference test gain
 - d) SSPL90

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S.Y.B.A.S.L.P. (2013 Course). Winter. 2017

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Day : *Thursday*
Date : *28-09-2017*

W-2017-3438

Time : *10:00 A.M. To 1:00 P.M*
Max. Marks : 70

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Answers to both the sections should be written in **SEPARATE** answer book.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw neat diagrams **WHEREVER** necessary.
- 5) Answers written in the inappropriate answer sheet will not be assessed in any case.

SECTION – B

- Q.2** Attempt any **FIVE** out of **SIX** questions: (5X3=15)
- a) Explain the operation of diode in forward biased condition.
 - b) What is the principle of loudspeaker? Explain the operation of any type of loudspeaker.
 - c) Name different types of signals.
 - d) Write a note on sound meter.
 - e) Draw and explain the operation of half-wave rectifier.
 - f) Write a note on sampling.

- Q.3** Attempt any **ONE** of following: (1X10=10)
- a) Draw the block diagram of microcomputer based system and explain each block.
 - b) Explain the operation of CRO with neat diagram.

SECTION – C

- Q.4** Attempt any **FOUR** out of **FIVE** questions: (4X5=20)
- a) What are the components of digital hearing aids? Describe its functioning briefly?
 - b) Describe the different types of compression circuits used in hearing aids.
 - c) Describe the functioning of multichannel technology in digital hearing aids
 - d) How are hearing aids classified?
 - e) Write a note on directional microphone.

- Q.5** Attempt any **ONE** of the following: (1X10=10)
- a) Describe the procedure of real ear measurement used for hearing aid fitting and its importance in comparison to functional gain measurement
 - b) Describe the prescriptive formulae used for programming of linear and nonlinear hearing aid.

- Q.6** Attempt any **ONE** of the following: (1X15=15)
- a) Describe the various measures of electroacoustic characteristics of hearing aids along with its importance.
 - b) Compare and contrast adult hearing aid fitting with hearing aid fitting in children.

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