



**ALL INDIA INSTITUTE OF SPEECH AND HEARING
MANASAGANGOTHRI
MYSURU 570 006**

ENTRANCE EXAMINATION 2018

M.Sc. (AUDIOLOGY)

Time: 100 minutes

Max. Marks 100

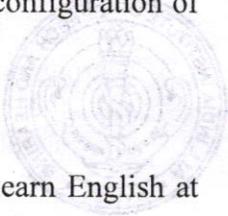
**Instructions: Answer all the questions
Each question carries one mark
Use ball point pen with black ink
Do not overwrite**

Select the most appropriate answer from among the four alternatives given and indicate it by marking an 'X' in the box adjacent to the correct answer (in the answer sheet). For example, if c) is the correct answer for a given question, then indicate your answer as shown below:

a) b) c) d)

**

- The gain of a hearing aid is 50 dB, knee point of compression is 50 dB SPL, compression ratio is 2:1. The output of this hearing aid for an input signal of 70 dB SPL is
 - 100 dB SPL
 - 105 dB SPL
 - 110 dB SPL
 - 40 dB SPL
- The battery life (in hours) of a zinc-air battery of a hearing aid, with capacity of 1260 mAH and a current drain of 6 mA is
 - 7266
 - 2100
 - 210
 - 126
- Calculate the dB SPL for 8,000 μ Pa (where \log of 2 = 0.3 & \log of 4 = .06)
 - 32 dB SPL
 - 42 dB SPL
 - 52 dB SPL
 - 62 dB SPL
- If a sampling rate of 16 kHz is used to convert the output of a hearing aid microphone to digital signal, the number of sample values in a 10 ms segment would be
 - 80
 - 160
 - 800
 - 1600
- Low coherence function value at low input levels of a hearing aid is due to
 - frequency lowering
 - circuit noise
 - extended frequency
 - distortion

- 
6. The difference in thresholds between consecutive octaves in flat configuration of audiograms is
- a) 5 dB
 - b) 10 dB
 - c) 15 dB
 - d) 20 dB
7. Children who initially learn American Sign Language and later learn English at school are considered as
- a) total communication users
 - b) bilingual
 - c) monolinguals
 - d) contrived system users.
8. A mandatory diagnostic test in case of high risk factors such as hyperbilirubinemia or anoxia is
- a) BOA
 - b) VRA
 - c) OAE
 - d) ABR
9. It is necessary to sample the input signal with a minimum of two samples per period of the sinusoid in a digital hearing aid, in order to avoid
- a) quantization error
 - b) aliasing error
 - c) digitization error
 - d) Nyquist error
10. In an auditory/oral approach, the following combinations are acceptable
- a) oral spoken language, speechreading, listening, & use of sign language
 - b) oral spoken language, speech reading, listening, & use of natural gestures
 - c) oral spoken language, listening, & use of natural gestures; written language
 - d) oral spoken language, & listening
11. The recommended reverberation time and signal-to-noise ratio in a class room are
- a) > 0.4 seconds; $< +15$ dB
 - b) < 0.4 seconds; $> +15$ dB
 - c) < 0.4 ms; $> +15$ dB
 - d) < 0.4 seconds; $< +15$ dB
12. The volume enclosed in a HA 1 coupler and a CIC coupler is
- a) 2 cc, 1.2 cc
 - b) 2 cc, 0.4 cc
 - c) 1.2 cc, 0.4 cc
 - d) 6 cc, 1.2 cc
13. To test for central auditory processing disorders in a patient with normal hearing sensitivity, the audiologist will
- a) increase the extrinsic redundancy
 - b) decrease the extrinsic redundancy
 - c) increase the intrinsic redundancy
 - d) decrease the intrinsic redundancy
14. Members of a Deaf Culture mainly include those who
- a) have post lingual deafness
 - b) have prelingual deafness
 - c) have very profound hearing loss
 - d) have learnt total communication

15. For consideration of binaural hearing aids for an individual with asymmetrical hearing loss
- a) the pure-tone average difference should be ≤ 15 dB between the ears
 - b) the speech recognition scores between the ears should be $< 20\%$
 - c) the speech recognition scores should be $\leq 40\%$ between the ears
 - d) the pure-tone average difference should be ≤ 40 dB between the ears
16. Sarva Shiksha Abiyan (2010) provides useful and appropriate education for all children aged
- a) 4 to 12 years
 - b) 6 to 14 years
 - c) 5 to 10 years
 - d) 5 to 18 years
17. Compared to the HA-2 coupler data, hearing aids placed on children tend to have
- a) more gain, same output
 - b) more output, same gain
 - c) less gain, less output
 - d) more gain, more output
18. The electrode array of a cochlear implant is located in the
- a) scala media
 - b) scala tympani
 - c) scala vestibuli
 - d) promontory
19. The requirements for programming a digital hearing aid include
- a) HI-PRO, NOAH, NOAHlink, programming cables
 - b) HI-PRO 2, hearing aid software, NOAH, programming cables
 - c) HI-PRO 2, NOAH, programming cables
 - d) NOAHlink, HI-PRO, programming cables
20. The process of hearing aid verification using real ear measurements includes
- a) REUR, REAR, REIR, matching target
 - b) matching target, REUR, REIR, REAR
 - c) REUR, REIR, matching target, REAR
 - d) REUR, matching target, REIR, REAR
21. The Real Ear Insertion Response (REIR) is
- a) REUR+REAR
 - b) REAR-REUR
 - c) REAR-REOR
 - d) REUR-REAR
22. If the complaint by a hearing aid user is 'own voice is sounding very loud', then
- a) reduce gain in high frequencies for soft input
 - b) ask him/her to speak softer
 - c) reduce gain in low frequencies for loud input
 - d) reduce gain in high frequencies for loud input
23. High frequency enhancement in an earmold is brought about by using a
- a) narrow sound bore
 - b) damper
 - c) vent
 - d) horn

24. The use of acoustic damper in an earmold
- a) reduces the low frequencies
 - b) reduces the length of sound bore
 - c) reduces the peaks in the frequency response
 - d) reduces high frequencies
25. In a cochlear implant, monopolar stimulation requires lesser current levels than bipolar due to
- a) lower electrode impedance
 - b) greater spread of current
 - c) higher electrode impedance
 - d) lesser spread of current
26. For every decibel increase in input, an increase by two decibels in the output in a hearing aid indicates
- a) compression
 - b) squelch
 - c) expansion
 - d) blooming
27. Administration of hearing aid outcome measures involve
- a) validation
 - b) verification
 - c) pre-selection
 - d) Selection
28. Speech reading is not influenced by
- a) facial expression
 - b) gender of adult speaker
 - c) rate of speech
 - d) reading abilities
29. The two sets /p, b, m/ and /t, d, n, l/ are examples of
- a) homophenes
 - b) visemes
 - c) homophones
 - d) fricatives
30. The following hierarchy is recommended in Auditory Verbal Therapy
- a) auditory/Cognitive skills in a structured listening environment; Auditory/Cognitive skills in Conversation; Auditory sequencing
 - b) auditory sequencing; Auditory/Cognitive skills in Conversation; Auditory/Cognitive skills in a structured listening environment
 - c) auditory sequencing; Auditory/Cognitive skills in a structured listening environment; Auditory sequencing; Auditory/Cognitive skills in Conversation
 - d) auditory/Cognitive skills in a structured listening environment; Auditory sequencing; Auditory/Cognitive skills in Conversation
31. Interhemispheric activities stimulate _____ and help in _____
- a) corpus callosum; interhemispheric transfer of information
 - b) temporal lobe / interhemispheric transfer of information
 - c) corpus callosum; temporal lobe stimulation
 - d) corpus callosum / Brocas area stimulation

32. Speech tracking requires an individual to
- | | |
|---|--|
| a) respond verbatim; Use communication strategies; Use articles in magazines, newspapers or story books. | c) respond verbatim; Avoid using communication strategies; Use articles in magazines, newspapers or story books. |
| b) respond approximating the meaning; Use communication strategies; Use articles in magazines, newspapers or story books. | d) respond verbatim; Use communication strategies; Use dialogues. |
33. The word-pairs /which-witch/ and /son-sun/ are examples of
- | | |
|---------------|-----------------------------------|
| a) homophenes | c) homophones |
| b) visemes | d) both homophenes and homophones |
34. In a synthetic method of speechreading, the speechreader needs to
- | | |
|---|--|
| a) perceive each phoneme of the message being transmitted | c) perceive the articulatory movements |
| b) not use intuitive thinking | d) perceive the meaning of what is being transmitted |
35. When providing auditory training for an individual with high frequency hearing loss, the consonant discrimination that you would start with is
- | | |
|----------|----------|
| a) /p-m/ | c) /s-ʃ/ |
| b) /t-r/ | d) /t-l/ |
36. Teaching a child with APD to 'ascribe his failure to insufficient effort', is a part of _____
- | | |
|------------------------------|------------------------|
| a) discourse cohesion device | c) reciprocal teaching |
| b) attribution training | d) schema induction |
37. The test that does not elicit conditioned responses is
- | | |
|--------|--------------------|
| a) BOA | c) TROCA |
| b) VRA | d) play audiometry |
38. Which of these is not a high risk factor for congenital hearing loss as per the JCIH (2007) position statement?
- | | |
|-----------------------|---|
| a) rubella | c) family history of permanent hearing loss |
| b) hyperbilirubinemia | d) otitis media |
39. If tympanometry is used as a screening test, failure criteria is
- | | |
|--------------------------------|--------------------------------|
| a) greater than 250 daPa width | c) greater than 150 daPa width |
| b) greater than 200 daPa width | d) greater than 100 daPa width |
40. The inner ear is developed from
- | | |
|-----------------------|-----------------------|
| a) I pharyngeal arch | c) I pharyngeal pouch |
| b) II pharyngeal arch | d) auditory placodes |

41. The 'eye blink responses' to loud sounds seen in infants is called
 a) ABR
 b) COR
 c) Moro reflex
 d) APR
42. Which of these is not a mandatory test in hearing screening in the first stage?
 a) OAE
 b) ABR
 c) immittance
 d) both a & b
43. What is the recommended level for hearing screening in school-going children using pure tone audiometry?
 a) 20 dBHL
 b) 30 dBHL
 c) 30 dBHL
 d) 40 dBHL
44. The stimulus recommended for hearing screening using ABR is
 a) tone burst
 b) click
 c) chirp
 d) tone pip
45. Which of these is not a subtype of CAPD listed under Buffalo model?
 a) decoding
 b) encoding
 c) tolerance Fading
 d) integration
46. The stimulus used in Auditory Response Cradle is
 a) filtered noise at 85 dBSPL
 b) filtered warble tone at 85 dBSPL
 c) filtered noise at 65 dBSPL
 d) filtered warble tone at 65 dBSPL
47. The process that causes hair cells to become enlarged due to vesiculation and vacuolization in the cytoplasm causing rupture in noise induced damage is
 a) apoptosis
 b) atypical
 c) necrosis
 d) scar formation
48. A single number used to express the over-all noise absorbing efficiency of acoustic material is
 a) noise reduction coefficient
 b) noise level correlate
 c) noise reduction rating
 d) noise dose
49. The frequency band in the cochlea that is most affected by noise exposure is
 a) 1000-4000 Hz
 b) 3000-6000 Hz
 c) 250-3000 Hz
 d) 4000-8000 Hz
50. In a successful hearing conservation program, the monitoring audiograms for factory workers exposed to occupational noise must be done
 a) annually
 b) quarterly
 c) monthly
 d) once in two years
51. Acoustic trauma causes the depolymerization of
 a) actin
 b) prestine
 c) myosin
 d) plasma

52. When the A-weighting scale of sound level meter is used, there is
- moderate deemphasis on high frequency
 - slight deemphasis on high frequency
 - maximum deemphasis on the low frequencies
 - equal emphasis on all frequencies
53. In a hearing aid with output compression, the volume control
- affects gain and MPO, but not knee-point
 - affects knee-point, gain and MPO
 - affects gain and knee-point, but not MPO
 - affects knee-point and MPO, but not gain
54. The primary goal for using a large area FM listening device is to
- provide favourable SNR
 - provide frequency lowering
 - provide high frequency amplification
 - provide open captioning
55. The type of earmold used with IROS hearing aid is
- shell mold
 - occluding mold
 - open mold
 - standard mold
56. Candidates for a totally implantable middle implant hearing aid include
- moderate conductive hearing loss
 - profound mixed hearing loss
 - moderately-severe sensorineural hearing loss
 - steeply sloping sensorineural hearing loss
57. The condition in which loudness of a continuous tone dies out completely is
- threshold tone decay
 - recruitment
 - loudness adaptation
 - decrement
58. The Auditory Fusion Test - Revised is designed to measure
- spectral resolution
 - intensity resolution
 - temporal resolution
 - frequency discrimination
59. In SISI-gram, abscissa and ordinate is used to represent
- frequency and SISI scores respectively
 - intensity and SISI scores respectively
 - SISI scores and frequency respectively
 - frequency and intensity respectively
60. Bekesy Type I pattern is seen in ears with
- cochlear and retro-cochlear pathology
 - Normal hearing and retro-cochlear pathology
 - normal hearing and conductive pathology
 - conductive and retro-cochlear pathology

61. The percentage of population having a specific disorder and correctly identified as having problem is termed as
- | | |
|----------------|-------------------|
| a) sensitivity | c) false positive |
| b) specificity | d) false negative |
62. Which of these frequencies is not tested in hearing screening of school going children using pure tone audiometry?
- | | |
|------------|------------|
| a) 500 Hz | c) 2000 Hz |
| b) 1000 Hz | d) 4000 Hz |
63. Monaural loudness balance test is designed to administer in cases with
- | | |
|---|--|
| a) monaural hearing loss having normal or near normal hearing at least at one frequency | c) bilateral hearing loss having normal or near normal hearing at least at one frequency |
| b) monaural hearing loss having equal hearing loss at all frequencies | d) bilateral hearing loss having equal hearing loss at all frequencies |
64. In yes-no method, tones are presented using the
- | | |
|------------------------|------------------------|
| a) ascending approach | c) bracketing approach |
| b) descending approach | d) fixed level |
65. The graph in which both sensitivity and specificity can be expressed is called
- | | |
|--|--------------------------------|
| a) receiver operating characteristic curve | c) psychometric function curve |
| b) roll over phenomena | d) sensitivity curve |
66. The tuning fork test in which the result is expressed in terms of time is
- | | |
|----------|--------------|
| a) Rinne | c) Weber |
| b) Bing | d) Schwabach |
67. The tuning fork test in which examiner alternately closes and opens the ear canal with a finger is
- | | |
|----------|--------------|
| a) Rinne | c) Weber |
| b) Bing | d) Schwabach |
68. Most ruptures caused by penetrating objects are situated in the
- | | |
|--------------------------------------|-------------------------------------|
| a) posterior portion of the ear drum | c) anterior portion of the ear drum |
| b) inferior portion of the ear drum | d) superior portion of the ear drum |
69. The unit of loudness is
- | | |
|------------|---------|
| a) decibel | c) phon |
| b) mel | d) sone |
70. The condition in which eardrum can be seen moving in and out during respiration is
- | | |
|-----------------------|-----------------------------|
| a) perforated eardrum | c) senile eardrum |
| b) retracted eardrum | d) patulous Eustachian tube |

71. As the frequency increases, mass reactance
- | | |
|---------------|--------------------|
| a) fluctuates | c) increases |
| b) decreases | d) does not change |
72. As the stimulus frequency increases, wave V latency of ABR
- | | |
|---------------|--------------------|
| a) increases | c) does not change |
| b) fluctuates | d) decreases |
73. Most widely used classification system for high frequency tympanograms is
- | | |
|--------------------|-------------------|
| a) Vanhuyse (1975) | c) Carhart (1951) |
| b) Jerger (1978) | d) Tillman (2000) |
74. The process of rejecting the signals that are similar across two electrodes is called
- | | |
|--------------|--------------------------|
| a) filtering | c) common mode rejection |
| b) averaging | d) epoching |
75. In humans, SOAEs are usually present in the frequency range of
- | | |
|-----------------|-----------------|
| a) 1000-3000 Hz | c) 3000-5000 Hz |
| b) 500-1000 Hz | d) 500-1500 Hz |
76. At 678 Hz probe frequency, the most prevalent type of tympanogram is
- | | |
|---------|---------|
| a) 3B1G | c) 3B3G |
| b) 1B1G | d) 5B3G |
77. The caloric test assesses
- | | |
|-------------------------|---------------------|
| a) semi circular canals | c) utricle |
| b) saccule | d) vestibular nerve |
78. Among the following stimuli, acoustic reflex thresholds are lowest for
- | | |
|---------------------|----------------------|
| a) 500 Hz pure tone | c) 1000 Hz pure tone |
| b) broad band noise | d) 4000 Hz pure tone |
79. While recording ABR, the stimulus artifacts are more for
- | | |
|------------------|----------------------|
| a) head phones | c) insert ear phones |
| b) bone vibrator | d) button receivers |
80. In 10-20 system, right temporal lobe is represented by
- | | |
|-------|-------|
| a) C3 | c) C4 |
| b) T4 | d) T3 |
81. Study of distribution and determinants of health related states or events in a specified population is
- | | |
|-----------------|-----------------|
| a) Semiotics | c) Ethnography |
| b) Anthropology | d) Epidemiology |
82. Given $F_0 = 300$ Hz, the wave length of a sound wave in air is
- | | |
|-----------|-----------|
| a) 11.1 m | c) 0.11 m |
| b) 11 m | d) 1.1 m |

83. Human Resource Development (HRD) in the context of persons with disability is based on
- a) empathy for persons with disability
 - b) cost-cutting for labour
 - c) balanced human resource policy
 - d) democratic policy
84. The rollover index is derived from
- a) SRT
 - b) SIS
 - c) SNR50
 - d) comfortable levels
85. NBS-9A is used to calibrate
- a) headphones
 - b) bone vibrator
 - c) speakers
 - d) sound level meters
86. NU-6 test consists of
- a) spondees
 - b) phonemically balanced words
 - c) sentences
 - d) paired words
87. RETFLs are used in the calibration of
- a) headphones
 - b) bone vibrators
 - c) insertphones
 - d) speakers
88. Ramsay Hunt syndrome is
- a) herpes zoster infection of geniculate ganglion
 - b) infection of trigeminal nerve
 - c) infection of Vagus ganglion
 - d) lateral rectus paralysis
89. The task involved in Lexical Neighborhood Test is
- a) awareness
 - b) discrimination
 - c) recognition
 - d) detection
90. The Cridu Chat syndrome is a
- a) neurological deficit
 - b) disorder of inner ear
 - c) limb abnormality
 - d) congenital abnormality of larynx
91. Gradenigo's syndrome has all triads except
- a) external rectus palsy
 - b) retro-orbital pain
 - c) persistent ear discharge
 - d) stridor
92. The frequently used 5-point Lickert-type rating scale consists of
- a) nominal scale
 - b) ordinal scale
 - c) interval scale
 - d) ratio scale
93. When degrees of freedom is very large, the distribution of 't' is virtually
- a) exponential
 - b) normal
 - c) uniform
 - d) binomial
94. A statement that states that "any difference observed on the post tests of the two groups is due to chance and sampling errors" is
- a) null hypothesis
 - b) sampling hypothesis
 - c) alternative hypothesis
 - d) error hypothesis

95. The sphincter at the oral opening is the
- a) lips
 - b) nostrils
 - c) checks
 - d) mandible
96. Meckel's cartilage and Reichert's cartilage give rise to
- a) cochlea
 - b) utricle and saccule
 - c) auditory nerve
 - d) ossicles
97. The test preferred for hearing threshold estimation in infants aged 9 months is
- a) BOA
 - b) VRA
 - c) SRT
 - d) Conditioned play audiometry
98. Any event which increases the probability that a stimulus will elicit subsequent response is called
- a) learning
 - b) reward
 - c) punishment
 - d) reinforcement
99. Artificial mastoid is a replication of
- a) acoustic impedance of the human head
 - b) mechanical impedance of the human mastoid
 - c) acoustic impedance of the human mastoid
 - d) mechanical impedance of the human head
100. The sound pressure level and the frequency of the tone given as input to hearing aid to find out the equivalent input noise as specified by ANSI S 3.22 – 2003 are
- a) 60 dB SPL at 1000 Hz
 - b) 60 dB SPL at 1600 Hz
 - c) 65 dB SPL at 1000 Hz
 - d) 65 dB SPL at 1600 Hz