



ALL INDIA INSTITUTE OF SPEECH AND HEARING, MYSORE-06

Ph.D. Entrance Examination, 2024-25

(AUDIOLOGY)

Time: 2 Hrs 30 Minutes

Date: 12th November, 2025

Max.Marks:100

PART – A

Instructions:

[50*1=50 Marks]

1. This part contains 50 multiple-choice questions; each question carries one mark.
2. Write your correct option along with the question number in the Answer Booklet.
3. Do not overwrite the options.

01. The germ layer from which the inner ear develops during the embryonic stage is
 - a) Ectoderm
 - b) Mesoderm
 - c) Endoderm
 - d) All three germ layers
02. The speech perception test that uses four alternative picture set for assessing speech identification in children is
 - a) Discrimination by identification of Pictures
 - b) WIPI
 - c) NU-CHIPS
 - d) Auditory Number Test
03. The inheritance pattern in affected father and a carrier mother, with both daughters and sons having a 50 % chance of being affected is
 - a) Y linked
 - b) X-linked dominant
 - c) Mitochondrial
 - d) X-linked recessive
04. The auditory assessment tool for children from 10-15 years, which has 24 situations completed by the child with regards to the use of a hearing aid or lack of it is
 - a) CHILD
 - b) PEACH
 - c) TEACH
 - d) P-APHAB
05. The questionnaire for CAPD screening which has 48 items listed under eight categories for children aged 6 years and older is
 - a) CHILD
 - b) CHAPPS
 - c) BMQ-R
 - d) APDQ

06. The function explained by the Lateralization-Vector theory (Jeffress, 1972) is
- a) Temporal integration b) Spatial perception c) Binaural Fusion d) MLD
07. The LiSN and Learn training is used to train which deficits in children with CAPD?
- a) Dichotic b) Prosodic c) Temporal patterning d) Spatial
08. Which of the following is NOT one of the key step of Auditory memory enhancement procedure?
- a) Sketching b) Listening c) Coding d) Writing
09. Interaural phase difference provides useful and unequivocal information about the location of
- a) High Frequency b) Mid frequency c) Low Frequency d) No dependent on the frequency
10. Temporal integration happens till what duration of the signal?
- a) 2sec b) Less than 10 ms c) 10-15ms d) 200 ms
11. Which of these best describes why human are able to binaurally locate the direction of relatively higher frequency (>1500 Hz) signals in the environment?
- a) ITD b) Diffraction effects produced by lower frequency signals c) Diffraction effects produced by higher frequency signals d) Head shadow effects produced by higher frequency signals
12. What occurs when a listeners experience of Binaural Phenomenon for high frequencies is affected by the simultaneous presence of low frequencies?
- a) Binaural interaction b) Binaural summation c) Binaural integration d) Binaural interference
13. Which one of the following is NOT a store and forward way of tele-health practice?
- a) E-mail b) Web based e-health patient service sites. c) Video-conferencing d) Multimedia
14. Which of the following is NOT designed as Middle-ear Implantable device?
- a) Vibrant soundbridge b) Carina c) Bone Bridge d) Envoy Esteem

15. Which of the following is NOT experienced as non-auditory perception in ABI patients?
 - a) Tingling sensation
 - b) Dizziness
 - c) Visual loss
 - d) Facial twitching
16. Which of the following conditions is NOT considered as Hard failure in the Cochlear Implant device?
 - a) Damage of the integrated circuit
 - b) Seepage of fluid into the case
 - c) Short circuits
 - d) Harsh Noise
17. In comparison to four-microphone fixed directional system, the adaptive directional system provides an improvement in speech reception threshold by
 - a) 1 to 3 dB
 - b) 6 to 12 dB
 - c) -24 dB
 - d) >24 dB
18. Which of the following colour damper reduces the maximum output of the Custom Hearing Aids?
 - a) White damper
 - b) Green damper
 - c) Red damper
 - d) Black damper
19. As speech sound travel away from the talker, they loose amplitude for every doubling of distance by
 - a) 3 dB
 - b) 6 dB
 - c) 9 dB
 - d) 12 dB
20. A functional assessment scale, which is based on the parental observation of their child's functioning in real world quiet and noisy situation is
 - a) DIAL
 - b) TEACH
 - c) PEACH
 - d) MAIS
21. Which of the following is the most robust phonetic feature under masked listening conditions?
 - a) Voicing
 - b) Place of articulation
 - c) Duration
 - d) Affrication
22. The use of recorded test materials leads to a decrease in performance in comparison to monitored live voice presentation by
 - a) 1%
 - b) 3%
 - c) 13%
 - d) 23%
23. 'A federal law that ensures that all children with disabilities are entitled to a free and appropriate public education in the least restricted environment' is known as
 - a) IDEA
 - b) IEP
 - c) ICFDH
 - d) IFSP
24. Epley Maneuver is used to treat
 - a) BPPV
 - b) Vestibular Neuritis
 - c) Meniere's disease
 - d) Labyrinthitis

25. Which of the following approaches are based on the notion that a general understanding of the entire message is important in speech reading?
- a) Analytic approach b) Synthetic approach c) Finger Spelling Approach d) Elaboration approach
26. The Gufoni Maneuver for Apogeotropic Nystagmus is also popularly called
- a) Apiani Maneuver b) Casani Maneuver c) Yacovino Maneuver d) Epley's Maneuver
27. An increased SP/AP ratio, a typical finding in Meniere's disease, can also occur in
- a) Superior Semicircular Canal Dehiscence b) Benign Paroxysmal Positional Vertigo c) Wernicke's Encephalopathy d) Posterior Inferior Cerebellar Artery (PICA) stroke
28. A Post-Auricular Muscle (PAM) response is enhanced by
- a) lateral gaze towards ear receiving auditory input b) lateral gaze away from ear receiving auditory input c) straight ahead upwards gazing d) Straight ahead downwards gazing
29. For a stationary source of noise, each doubling of the number of averaged sweeps or of the recording time, the background noise contribution to the ABR waveform will be reduced by about
- a) 0.4 times b) 1.4 times c) 2.4 times d) 3.4 times
30. The classification of the temporal bone fracture into longitudinal and transverse utilizes the reference of long axis of the
- a) Petrous bone b) Mastoid process c) Tympanic portion d) Squamous portion
31. The genetic anomalies associated with OPA1 and OTOF are encountered in
- a) Meniere's disease b) Otosclerosis c) Usher Syndrome d) Auditory Neuropathy Spectrum Disorders
32. Which of the following is NOT a type of hyperacusis?
- a) Annoyance hyperacusis b) Fear hyperacusis c) Pain hyperacusis d) Intolerant Hyperacusis

33. In case of Ordinal data, the test of choice for comparison among three or more independent sample is
- a) Kruskal-Wallis test b) Freidman test c) Wilcoxon signed rank test d) Independent sample t-test
34. On Sensory Organization Test of Computerized Dynamic Posturography, the name VEST (vestibular) refers to the ratio
- a) Condition 2 to Condition 1 b) Condition 3 to Condition 1 c) Condition 4 to Condition 1 d) Condition 5 to Condition 1
35. The quick phases of nystagmus generated during vestibular and optokinetic stimulation are a form of
- a) Saccades b) Convergence c) Divergence d) Vestibulo-ocular reflex
36. Which research design does the following represent?
Group A X _____ O
Where 'X' represents exposure and 'O' represents a measure.
- a) One-Group Pretest-Posttest Design b) One-Shot Case Study c) Single-Group Time-Series Design d) A-B-A Single-Subject Design
37. Activation of skin and sweat glands causes artifacts in the frequency range of
- a) 20-50 Hz b) 10-500 Hz c) 0.1- 2 Hz d) 1-50 Hz
38. During ABR acquisition, a high-pass filter of 100 Hz with a filter slope of 12 dB/octave maximizes the amplitude of
- a) Wave I b) Wave II c) Wave III d) Wave V
39. In a patient with a traumatic brain injury with a transverse temporal bone fracture, the LEAST LIKELY finding would be
- a) Sensorineural hearing loss b) Complain of vertigo c) Facial nerve paralysis d) Conductive hearing loss
40. The most common form of otitis media is
- a) Adhesive Otitis Media b) Serous Otitis Media c) Acute Suppurative Otitis Media d) Bullous Myringitis

41. In the context of cochlear non-linearity, the term 'Negative damping' refers to
- | | | | |
|---------------------------------|---|--------------------------|--|
| a) Amplification of soft sounds | b) Slope of the apical side of tuning curve | c) Frequency selectivity | d) Slope of the basal side of the tuning curve |
|---------------------------------|---|--------------------------|--|
42. The epidermal layer of tympanic membrane and external ear canal, which migrates outwards to keep away from shed skin cells is called
- | | | | |
|------------------|-----------------|---------------|-------------------|
| a) Keratinocytes | b) Chondrocytes | c) Fibrocytes | d) Microgliocytes |
|------------------|-----------------|---------------|-------------------|
43. The Kimura's membrane is situated in the
- | | | | |
|---------------------|---------------------|------------------------|-----------------------|
| a) Basilar membrane | b) Reticular lamina | c) Reissner's membrane | d) Tectorial membrane |
|---------------------|---------------------|------------------------|-----------------------|
44. The electrical conduction through node to node rather than diffusing along the entire length of axon membrane of the neuron is called
- | | | | |
|---------------------------|-------------------------|---------------------------|------------------------------|
| a) Axoaxonic transmission | b) Saltatory conduction | c) Homeostatic conduction | d) Axodendritic transmission |
|---------------------------|-------------------------|---------------------------|------------------------------|
45. The ratio of the characteristic frequency to the absolute bandwidth of the frequency tuning curve 40 dB above characteristic frequency is
- | | | | |
|-------------|-------------|-------------------|--------------------|
| a) Q_{10} | b) Q_{40} | c) critical ratio | d) frequency ratio |
|-------------|-------------|-------------------|--------------------|
46. The primary neurotransmitter found in the efferent auditory nerve terminal is
- | | | | |
|---------|------------------|--------------|-----------------|
| a) GABA | b) Acetylcholine | c) Glutamate | d) Ephinephrine |
|---------|------------------|--------------|-----------------|
47. In case of Meningitis, the severe headache over the entire head is experienced because of
- | | | | |
|---|--|---|--|
| a) meninges innervated by a cranial nerve and cervical nerves | b) cessation of neural activity in the cortical region | c) activation of sympathetic and parasympathetic nervous system due to inflammation | d) excitation of the pain receptor areas in the brain due to infection |
|---|--|---|--|
48. The RMS amplitude of a sine wave with a peak amplitude of 4 is
- | | | | |
|---------|---------|---------|--------|
| a) 3.14 | b) 0.70 | c) 2.82 | d) 2.0 |
|---------|---------|---------|--------|
49. An object has an initial resonant frequency of 200 Hz. If the stiffness of the object is increased by a factor of 4 and the mass is increased by a factor of 16, the new resonant frequency of the object will be
- | | | | |
|----------|-----------|-----------|-----------|
| a) 50 Hz | b) 100 Hz | c) 400 Hz | d) 800 Hz |
|----------|-----------|-----------|-----------|

50. The relationship between pitch in Mel scale and frequency is

- a) Linear b) Non-linear c) Logarithmic d) Exponential

PART B

Answer any five questions, each question carries ten marks

[5*10=50 Marks]

1. Discuss the neurophysiology of localization.
2. Describe the auditory perceptual training used for a child with auditory closure deficits.
3. Which objective test are used for Hearing Aid fitting in children with hearing loss? Justify with evidence from Literature.
4. Explain the neurophysiological model used for the management of the tinnitus.
5. Enumerate about the effect of sound coding strategies on speech perception in Cochlear Implant users.
6. Describe the Pathophysiology of BPPV.
7. Discuss the controversies regarding the generators of various peaks of ABR.



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(AUDIOLOGY)-Answer Keys

1	A	21	A	41	A
2	C	22	C	42	A
3	D	23	A	43	D
4	D	24	A	44	B
5	C	25	B	45	B
6	D	26	B	46	B
7	D	27	A	47	A
8	C	28	A	48	C
9	C	29	B	49	B
10	D	30	A	50	B
11	D	31	D		
12	D	32	D		
13	C	33	A		
14	C	34	D		
15	C	35	A		
16	D	36	B		
17	B	37	C		
18	C	38	A		
19	B	39	D		
20	C	40	B		

Any challenges against the above answer keys shall invariably be sent to the email ID- director@aiishmysore.in with the appropriate supporting documents in JPEG/PDF only on or before 13/11/25 till 5pm. No correspondence will be entertained after the stipulated date and time.

M. P. Prasad
Director