

OC 010 (Sp & Hg)

III Semester B.Sc. (Sp. & Hg Examination, Dec. 2008

(Scheme : ISS)

Speech and Hearing

Maxillofacial Anomalies and Laryngectomy

Time: 2 Hours

Max. Marks: 50

Instruction : All questions carry equal marks.

- I. 1. a) Write the processes involved in the formation of lip. 2
b) Describe the classification of cleft lip and palate as proposed by Millard and write the advantages and disadvantages of the same. 6
c) Explain phoneme specific VPD. 2

OR

2. a) Describe the physiology of velopharyngeal closure. 6
b) Describe the compensatory articulation for fricatives in clients with cleft palate. 4

- II, 3. a) Write the feeding problems and remedies for children with cleft lip and palate. 6
b) Write the different types of dental problems seen in clients with cleft lip and palate. 4

OR

4. a) Write the assessment protocol for resonance. 7
b) Write a note on articulation problems seen in children with cleft palate. 3

- III. 5. a) Describe the role of muscle training in treating patients with VPD. 6
b) Write a note on speech intelligibility in patients with glossectomee. 4

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6. a) Define prosthesis. Describe the role of prosthesis in treating children with cleft lip and palate. 7
- b) Describe the associated problems seen in mandibulectomy. 3

- IV. 7. a) Describe the consequences of total laryngectomy. 7
- b) Near total laryngectomy. 3

OR

8. a) Write the different protocols available for assessment of laryngectomee. 7
- b) Describe the causes and symptoms of laryngeal cancer. 3

V. 9. Write notes on the following :

- a) Air insufflation test. 2
- b) PE segment. 2
- c) Gastric speech. 2
- d) TEP Vs esophageal speech. 4

OR

10. a) Describe the different air take procedures for teaching esophageal speech. 6
- b) How do you teach speech to a laryngectomee using artificial larynx ? 4

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III Semester B.Sc. (Sp. & Hg.) Examination, December 2008

(Scheme : ISS)

Phonological Disorders

Time: 2 Hours

Max. Marks: 50

Instruction : Answer all questions.

- I. 1. Classify different speech sounds based on place and manner of articulation. 10
- OR
2. a) Define phonology. 2
- b) Write a note on phonological development. 8
- II. 3. a) Differentiate between /p//m//s/ based on distinctive features. 6
- b) Describe the acoustics of affricates. 4
- OR
4. What factors would you consider in the development of an articulation test in your language ? 10
- III. 5. a) Explain the misarticulations in patients with neurological causes. 6
- b) What are the types of lisping ? Give examples. 2
- c) How does ankyloglossia affect articulation? 2
- OR
6. a) Classify the causes of misarticulation. 8
- b) What is the incidence and prevalence of misarticulation in India ? 2

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- IV. 7. a) How do you assess articulation in a normal preschool child? 4
- b) Discuss the influence of cognitive-linguistic features. 4
- c) Identify the articulation error in the following : 2
- i) /rabit/--> /wabit/
- ii) /sku:Z/--> /ku://
- OR
8. Describe the articulatory and prosodic problems of children with mental retardation. 10
- V. 9. a) Describe the different approaches to articulation therapy. 6
- b) How would you employ a personal computer in articulation therapy for children in the age range of 5 to 7 years ? 4
- OR
10. a) What are the different stages of traditional articulation therapy ? 6
- b) Discuss the techniques of minimal pair approach in correcting phonological disorders. Illustrate with examples. 4

OC 030 (Sp & Hg)

III Semester B.Sc, (Sp. & Hg.) Examination, December 2008

(Scheme : ISS)

Speech and Hearing

Diagnostic Audiology : Behavioural Tests

Time : 2 Hours

Max. Marks : 50

- I. 1) Explain what you understand by sensitivity and specificity of an auditory test ? How is this going to help you interpret auditory findings in diagnostic audiology ? 10

OR

- 2) How do you decide what auditory test/tests should be employed with a 25 year old lady who has presented history of sudden hearing loss ? 10

- II. 3) List the tests available to differentiate between, 10
a) Conductive and SN hearing loss.
b) Cochlear and retrocochlear pathology.
Briefly explain their merits and demerits.

OR

- 4) What are the tests for auditory adaptation ? Write in detail on any one test 10

- III. 5) What are the non-speech tests available for testing functional hearing loss ? Explain any one. 10

OR

- 6) Describe in details the following tests :
a) Doefler-Stewart test
b) Speech Stenger test 10

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IV. 7) Explain the need and rationale for special speech test in detection of auditory processing deficits. 10

OR

8) Describe any two tests using temporal ordering tasks for the assessment of auditory processing disorders. 10

V. 9) What factors would you consider for construction of tests for the assessment of auditory processing in children ? 10

OR

10) Describe the auditory profile in adults with behavioural tests for the following : 10

a) Extra-axial brainstem lesion

b) Inter-hemispheric dysfunction.

OC 040 (Sp & Hg)

III Semester B.Sc. (Sp, & Hg) Examination, December 2008

(Scheme : ISS)

Speech and Hearing Educational Audiology

Time : 2 Hours

Max, Marks : 50

Instruction : Answer all questions.

I. 1) Write notes on the need for early identification of hearing impairment. 10

OR

2) How would your goals in rehabilitation vary depending on the degree of hearing loss of a child and age in which the problem was identified ? 10

II. 3) Describe the advantages and disadvantages of the use of sign language. 10

OR

4) Explain the concept of total communication. Discuss its merits and demerits. 10

III. 5) Differentiate between :

a) Natural Vs. structural method. 4

b) Describe any one natural method. 6

OR

6) Discuss in detail:

a) Verbotonal method 5

b) Tadoma method 5

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IV. 7) Explain the concept of integration with reference to the education of children with hearing impairment. List the various placement options available in the Indian context. 10

OR

8) What factors should be considered while selecting an educational placement for a 2 1/2 year old child with hearing impairment ? 10

V. 9) Discuss the importance of classroom acoustics in setting up "classroom" for children with hearing impairment. 10

OR

10) What is home training ? What are its needs ? Prepare a lesson plan for 3 year old child with severe hearing loss staying in rural area. 10

OC 050 (Sp & Hg)

III Semester B.Sc. (Sp, & Hg,) Examination, December 2008

(Scheme : ISS)

Biomedical Instrumentation and Acoustics

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions,

- I, 1) a) Which display device is used in the front panel of an audiometer ? Mention its structure and working, 4
b) Mention which electronic component is used as (i) Telecoil (ii) Volume control in a hearing aid, 2
c) Which electronic component is used as an amplifier in analog body worn hearing aids ? How does this component work as an amplifier ? 4

OR

- 2) a) Can we use an inverter to provide backup power supply to a computerized audiometer ? Justify. 3
b) List four applications of integrated circuits in the field of speech and hearing. 2
c) With a block diagram explain how does a DC power supply work. Describe line regulation and load regulation. 5
- II. 3) a) Why dB scale is used to quantify sound ? 3
b) Which microphone is used for accurate measurement of sound ? Why ? Describe its structure and working. 4
c) Reverberation time in a room should neither be too high nor too low. Justify. 3

OR

- 4) a) List the advantages of optical recording over magnetic recording. 2
b) Explain how sound is recorded on a compact disk. 4
c) Why loudspeakers are always fixed in enclosures ? 4

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- III. 5) a) List two applications each of : 2
(i) Flip flop (ii) Digital counter
b) Convert to binary and then to hexadecimal. 4
(i) 128 (ii) 512
c) With truth tables explain the working of : 4
(i) NAND gate (ii) NOR gate

OR

- 6) a) Distinguish between an application software and an operating software. Give two examples each. 4
b) Describe the functions of the following components in the working of a computer (i) Hard disk (ii) RAM 4
c) Differentiate between a CRT monitor and an LCD monitor 2
IV. 7) a) List the precautions to be taken while fixing electrodes on the body of a patient for electrophysiologic measurements. 2
b) An output transducer is always preceded by a power amplifier. Justify. 3
c) With a block diagrams explain the working of a computerized audiometer. 5

OR

- 8) a) With a neat block schematic of the equipment set up used, explain how will you calibrate the pure tone of an audiometer in bone conduction mode ? 5
b) With supporting diagrams, explain how a 'dead spot' occurs in a classroom fixed with an induction loop system ? 3
c) With a block diagram, illustrate how a TEOAE analyzer works ? 2
V. 9) a) Discuss the role of an A to D converter and D to A converter in a digital hearing aid. 5
b) Discuss the advantages of a digital hearing aid over analog hearing aid. 3
c) How is a digital filter different from an analog filter ? 2

OR

- 10) a) Describe the steps involved in converting analog signal to digital signal. 5
b) Describe how an FIR filter functions ? 5

OC 060 (Sp & Hg)

III Semester B.Sc. (Sp. and Hg.) Examination, December 2008 (Scheme : ISS) Statistics and Research Methods

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- I. 1) Define statistics and discuss usefulness of quantification in speech and hearing sciences. 10

OR

- 2) Describe various scales of measurement with their relative merits and demerits. 10

- II. 3) What is sampling? Briefly describe different methods of sampling. 10

OR

- 4) What is an ogive ? Construct the cumulative percentage frequency graph for the following data and draw the inferences. 10

Scores	Frequencies
52-55	1
48-51	0
44-47	5
40-43	8
36-39	17
32-35	12
28-31	8
24-27	2
20-23	3
16-19	4
	<u>60</u>

- III. 5) Describe the general properties of normal distribution curve and the variants of normal distribution. 10

OR

- 6) Compute the mean and standard deviation for the following data. 10

Scores	Frequencies
120-122	2
117-119	2
114-116	2
111-113	4
108-110	5
105-107	9
102-104	6
99-101	3
96-98	4
93-95	2
90-92	1

N=40

- IV. 7) What is correlation ? Compute the correlation from the rank-difference of two therapist's ratings of dysfluency characteristics and its significance. 10

Characteristics	Therapist 1	Therapist 2
A	2	1
B	1	2
C	4	5
D	3	6
E	6	4
F	5	3

OR

- 8) The dysfluency rate of ten stutterers before therapy and after therapy are given below: Determine whether the speech therapy has any significant influence on fluency rate and interpret the results. 10

Subjects	A	B	C	D	E	F	G	H	I	J
Before therapy	20	25	15	18	22	13	10	17	19	26
After therapy	10	12	7	6	10	5	2	8	7	10

- V. 9) What is a research design? Discuss single subject pre-experimental and the multiple baseline designs. 10

OR

- 10) Discuss the format of research report writing. 10