

OA 01(1 (Sp & Hg)

I Semester B.Sc. (S & H) Examination, Dec. 2008

(Scheme : ISS)

Speech and Hearing

Introduction to Speech and Language Pathology

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all the questions.

I. 1) Write short notes on :

- a) Intrinsic muscles of larynx. 5
- b) Functions of speech. 5

OR

2) Write short notes on :

- a) Intrinsic muscles of tongue. 5
- b) Characteristics of good speech. 5

II. 3) With a neat diagram describe the various active and passive articulators and their functions. 10

OR

4) Describe in brief the physiology of respiration. 10

III. 5) Describe the social principles and social bases of speech. 10

OR

6) Describe the psychological bases of speech. 10

IV. 7) a) Define 'fluency disorders'. 2

b) What are the causes of stuttering? 4

c) Describe the overt behaviours of stutterers. 4

OR

8) Describe the speech and language characteristics of SLI (Specific Language Impairment) 10

V. 9) Describe various voice disorders. 10

OR

10) Describe dysarthria in children. 10

O A 020 (Sp & Hg)

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

(Scheme : ISS)

Speech and Hearing

Introduction to Audiology

Time: 2 Hours

Max. Marks : 50

Instruction : Answer all the questions.

- I. 1) a) Define 'Audiology' and 'Audiologist'. 4
b) Discuss the scope of an audiologist and describe the various settings in which an audiologist can practice. 6

OR

- 2) What information need to be gathered in while taking history from an adult with hearing loss and how is it useful ? 10

- II. 3) a) What is the rationale behind the usage of dB concept in audiology ? 4
b) Write short notes on :
i) dBSPL ii) dBSL iii) dBHL iv) RETSPL 6

OR

- 4) a) What is threshold of audibility, MCL and UCL ? 3
b) Describe the procedure for determining minimum audible level. 7

- III. 5) a) What are Phons and Sones ? 4
b) Explain the relationship between the two with suitable graph. 6

OR

- 6) a) What is differential threshold ? 2
b) How is it measured ? 3
c) How does DLF and DLI vary with frequency and intensity of stimulus ? 5

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- IV. 7) a) What is congenital deafness ? What are the causes for congenital hearing loss ? 6
- b) Describe any four syndromes associated with hearing loss. 4

OR

- 8) a) What are the causes of conductive hearing loss ? 5
- b) Explain the signs and symptoms of conductive hearing loss. 5
- V. 9) a) What are the benefits and limitations of different tuning fork tests ? 8
- b) Where is the tuning fork placed in each of the fork tests ? 2
- i) Weber test ii) Schwabach test
- iii) Bing test iv) Rinne test

OR

- 10) a) What is occlusion effect ? 2
- b) Name and describe a tuning fork test. 4
- c) Describe the audiometric version of Weber test. 4

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

(Scheme : ISS)

Speech and Hearing

Anatomy, Physiology and Pathology of Speech and Hearing System

Time: 2 Hours

Max. Marks: 50

PART - A

20

(Anatomy of Speech and Hearing Systems)

Answer any two questions. Illustrate wherever necessary.

(10x2=20)

1. Describe the anatomy of respiratory system. 10
2. Write about different auditory pathway. 10
3. Explain different anatomical planes with suitable examples. 10
4. Describe the anatomical structure of the tympanic membrane. 10

PART - B

15

(Physiology of Speech and Hearing Systems)

Answer all questions.

1. a) Explain the function of Uvula. 5

OR

- b) Explain the physiology of vocal folds. 5
2. a) Discuss the physiology of stereocilia. 5

OR

- b) Explain the physiology of pinna. 5

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3. Describe the physiology of soft palate. 5

OR

4. Explain the physiology of basilar membrane. 5

PART - C 15

(Pathology of Speech and Hearing Systems)

All questions are compulsory.

1. Describe in detail the process of cell injury (inflammation) and repair. 7

OR

Describe the pathogenesis of CSOM (alticoanatal variety). Mention the complications and sequela of CSOM. 7

2. Write short notes on **any two** : 8

- a) Developmental anomalies of the larynx.
- b) Factors influencing healing process.
- c) Disorders of vitamin deficiency.
- d) Differentiate between acute and chronic inflammations with examples.

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I Semester B,Sc. (Sp. & Hg.) Examination, December 2008
(Scheme : ISS)
Speech and Hearing
Biomedical Instrumentation and Acoustics

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- I. 1) a) Which electronic component is used as a telecoil in hearing aids? Explain its working. 4
- b) With supporting diagrams explain the working of a UJT. 4
- c) List the differences between a transistor and an FET. 2
- OR
- 2) a) Distinguish between a UPS and an Inverter. Can we use an inverter supply to a computer. Why ? 4
- b) List the specifications of a DC power supply. 2
- c) What is an integrated circuit ? List the applications. 4
- II. 3) a) Differentiate between sound pressure level and sound power level. 4
- b) Define
(i) Timbre (ii) Loudness 4
- c) Mention the different types of wave propagation with examples. 2
- OR
- 4) a) Which microphone is used for high quality sound recording ? Explain the structure and working of this microphone. 4
- b) Explain the role of a loudspeaker enclosure. 4
- c) State and explain Sabine's formula. 2

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III. 5) a) Convert the following hexadecimal numbers first to binary and then to decimal.

(i) FF (ii) 80 4

b) Explain how a digital counter works. 4

c) Write the truth table of an 'OR' gate. 2

OR

6) a) With a block diagram, explain the working of a computer. 4

b) State the difference between RAM and ROM. 2

c) Explain how a computer hard disk functions. 4

IV. 7) a) List the different types of transducers used in the field of speech and hearing. 2

b) Explain the different types of filters with their respective frequency response curves. 4

c) Explain how an oscillator works. List two applications. 4

OR

8) a) With a functional block diagram, explain the working of a speech spectrograph. 4

b) Differentiate between a digital hearing aid and a programmable hearing aid. 4

c) List the equipments required for calibrating an audiometer. 2

V. 9) a) How is a digital signal different from an analog signal ? Explain. 4

b) Explain how an analog signal is converted to digital signal. Draw all supporting diagrams. 6

OR

10) a) How is a digital filter different from an analog filter ? Explain how a digital filter works. 6

b) List a few applications of digital signal processing in speech and hearing field. Explain why digital signal processing is preferred over analog signal processing in these applications. 4

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

(Scheme : ISS)

Speech and Hearing

Linguistics, Phonetics and Language Sciences

Time : 2 Hours

Max. Marks : 50

Instruction : All units are compulsory.

- I. 1) What is Linguistics ? Write an essay on how it goes about studying the domain of enquiry. 10
- OR
- 2) Language is a species - specific property. Elucidate with reference from animal communication systems. 10
- II. 3) a) Elucidate briefly the principles of morphemic analysis. 7
b) Distinguish with examples between inflection and derivation. 3
- OR
- 4) Describe briefly the following dichotomies : 10
a) Competence Vs. performance
b) Deep structure Vs. surface structure
c) Comprehension Vs. expression
d) Acceptability Vs. grammaticality
e) Simple Vs. complex sentences.
- III. 5) What are the parameters for description of a consonant ? Attempt an articulatory classification of consonants. 10

OR

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- 6) a) What is distinctive feature theory in phonology ? 7
- b) Explain with one example the concept of phoneme and allophone. 3
- IV. 7) Write an essay on the theories and models of first language acquisition. 10
- OR
- 8) a) Elucidate the issues of second language acquisition. 7
- b) Explain with one example the concept of bilingualism and language transfer. 3
- V. 9) Give an introduction to the language families of the world and India. Illustrate. 10
- OR
- 10) What are the different writing systems of India ? Give their advantages and disadvantages. 10

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I Semester **B.Sc. (Sp. & Hg.) Examination, December 2008**
(Scheme : ISS)

Psychology Related to Speech and Hearing

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all the questions. Internal choice is provided.

- I. 1) Trace the history of clinical psychology and its application to the field of speech and hearing. 10

OR

- 2) Explain the concept of normality and pathology. Bring out the importance of social action model in explaining behaviour. 10

- II. 3) Discuss the case history method in the assessment of speech disorders. 10

OR

- 4) Describe DSMIV classification of mental disorders. 10

- III. 5) a) Explain the stages in motor development during early childhood. 5

- b) Write in brief, on Piaget's theory of cognitive development. 5

OR

- 6) a) Describe emotional development during childhood. 4

- b) Explain the tests used for assessment of cognitive functions. 6

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IV. 7) a) Discuss the scope and methods in psychology of learning. 5

b) Highlight the importance of studying psychology of learning in communication disorders. 5

OR

8) a) Describe the learning curves. 5

b) Discuss the principles of operant conditioning. 5

V. 9) a) Explain the neuropsychological correlates of learning. 5

b) Briefly describe the schedules of reinforcement. 5

OR

10) a) Delineate the techniques derived from operant conditioning to enhance skill behaviours... 5

b) Discuss the behaviour modification techniques in the management of problem behaviours. 5