

25501



**I Semester B.Sc. (Sp & Hg) Examination, November/December 2010
(Scheme : ISS)**

**Speech and Hearing
Introduction to Speech and Language Pathology**

Time : 2 Hours

Max. Marks : 50

Instructions : Answer all questions. All questions carry equal marks.

- I. 1) a) Define and differentiate with examples, speech, language and communication. **5**
b) What are the components of language ? Give examples for each. **5**
OR
2) Compare and contrast : **(5×2)**
a) Semantics vs. syntax
b) Nativism vs. behaviorism.
- II. 3) With a neat diagram describe the anatomy and physiology of the muscles of the tongue. **10**
OR
4) Discuss the cognitive bases of speech. **10**
- III. 5) Write short notes on : **(5×2)**
a) Babbling
b) Joint attention.
OR
6) Describe the development of fluency. **10**
- IV. 7) Write briefly on : **(2×5)**
a) Delay vs. deviance
b) Stuttering vs. normal nonfluency
c) Signs vs. symptoms
d) Incidence vs. prevalence
e) Puberphonia vs. Androphonia.
OR
8) What are the causes for speech language disorders ? **10**
- V. 9) List the common speech and language characteristics of a child with mental retardation. **10**
OR
10) Define aphasia. State the various causes for aphasia. **10**
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I Semester B.Sc. (Sp & Hg) Examination, Nov./Dec. 2010

(Scheme : ISS)

Speech and Hearing

Introduction to Audiology

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- I. 1) a) Define Audiology and Audiologist. 4
b) Describe the role of related fields for the development of Audiology. 6

OR

- 2) Write an essay on the usefulness of case history with suitable examples. 10

- II. 3) a) Differentiate between 6
i) MAP and MAF
ii) dBSPL and dBHL
iii) MCL and UCL.
b) Write short notes on 4
i) RETSPL
ii) dBSL.

OR

- 4) a) Define threshold of audibility. 2
b) Describe the procedure for obtaining MAP and MAF curves. Explain the characteristics of MAP and MAF curve with suitable graph. 8

- III. 5) Write short notes on
a) equal loudness contours. 6
b) differential threshold. 4

OR

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6) What is the relationship between

10

- i) loudness and intensity
- ii) pitch and frequency
- iii) phon and sone
- iv) pitch and intensity.

IV. 7) Outline the characteristics of conductive hearing loss.

10

OR

8) Write a note on any two syndromes with associated hearing loss.

10

V. 9) What are the different tuning fork test findings in a case with unilateral conductive hearing loss ?

10

OR

10) Write the procedure, interpretation and clinical application of audiometric Weber and Bing test. Name the principle underlying each of the 2 tests.

10

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I Semester B.Sc. (Sp. & Hg.) Examination, Nov./Dec. 2010

(Scheme : ISS)

Speech and Hearing

Anatomy, Physiology and Pathology of Speech and Hearing Systems

Time : 2 Hours

Max. Marks : 50

Instruction : All the Parts are compulsory.

PART – A

(Anatomy)

Answer any two questions :

20

1. Write in detail about the anatomical structure of the tympanic membrane. **10**
2. Describe the skeletal frame work of the larynx. **10**
3. a) Describe the posterior wall of the tympanic cavity with a neat labelled diagram. **5**
b) Describe the blood supply of the larynx. **5**

PART – B
(Physiology)

Answer all questions :

15

- I. 1) Explain the different modes of bone conduction. **8**

OR

- 2) Write short notes on :

- i) Functions of the stereocilia. **4**
- ii) Non-auditory functions of the auditory nerve. **4**

- II. 3) Discuss the functions of tongue. **7**

OR

- 4) Write notes on :

- a) Vital capacity. **3**
- b) Functions of soft palate. **4**

P.T.O.

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PART – C
(Pathology)

Instructions : 1) Answer any two questions.

2) Illustrate diagrams wherever necessary.

15

I. a) Explain Neoplasia. Discuss differences between benign and malignant tumours. 7

OR

b) Define inflammation. Describe chemical mediators of acute inflammation. 7

II. Write short notes on any two : 8

a) Laryngeal Nodule

b) Factors modifying healing

c) Fatty change liver

d) Granuloma.

PART – B
(Physiology)

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I Semester B.Sc. (Sp. and Hg.) Examination, November/December 2010
(Scheme : Semester) (ISS)
Speech and Hearing
Linguistics, Phonetics and Language Sciences

Time : 2 Hours

Max. Marks : 50

Instruction : Answer all questions.

- I. 1) Define 'Language'. Illustrate its functions. (2+8=10)
- OR
- 2) What are the principles of morphemic analysis ? Explain these principles by giving suitable examples. 10
- II. 3) Illustrate :
- a) Competence and Performance. 4
 - b) Langue and Parole. 4
 - c) Compound sentence. 2
- OR
- 4) Illustrate :
- a) Speech act. 4
 - b) Antonym and its types. 4
 - c) Pragmatics. 2
- III. 5) How are consonants classified ? Explain each classification giving suitable examples. 10
- OR
- 6) Explain various principles of phonemic analysis. Give examples. 10
- IV. 7) Briefly explain various theories of language acquisition. 10
- OR
- 8) What are the factors that influence second language learning/acquisition ? Explain. 10
- V. 9) With suitable examples, write in brief on the major language families of the world. 10
- OR
- 10) Write a note on various types of writing systems. 10

25507



I Semester B.Sc. (S & H) Examination, November/December 2010
(Integrated Semester Scheme)
Speech and Hearing
Psychology Related to Speech and Hearing

Time : 2 Hours

Max. Marks : 50

- I. 1) a) What is clinical psychology ? 2
b) Discuss its relevance in the field of speech and hearing. 8

OR

- 2) a) Describe various models of mental disorders. 6
b) Write short notes on normality and abnormality. 4

- II. 3) a) Briefly explain the steps involved in case history taking. 5
b) Write a brief note on ICD-10. 5

OR

- 4) a) Explain various types of psychological assessment. 6
b) Write a brief note on clinical interview. 4

- III. 5) a) Explain briefly various stages of social developments. 6
b) Describe first two stages of Piaget's theory of cognitive developments. 4

OR

- 6) a) Explain any three tests of intelligence. 6
b) Explain any two tests used in the assessment of personality. 4

- IV. 7) a) Explain various types of learning. 4
b) Briefly explain the measurement of learning. 6

OR

- 8) Describe the principles of operant conditioning. 10

P.T.O.



V. 9) Explain stages and techniques used in the management of problem behavior. 10

OR

10) Write short notes on the following: 10

- a) Prompting
- b) Neurochemical correlates of learning
- c) Neuropsychological correlates of learning
- d) Extinction.
- e) Reinforcement.

OR

OR

OR

OR

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I Semester B.Sc. (S&H) Examination, November/December 2010

(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 volume control in hearing aids ?
Explain how it works. 4
- b) Which electronic component is used as a telecoil in hearing aids ? Explain
how it works. 4
- c) Briefly explain how a transistor is used as an amplifier. 2
- OR
- 2) a) Differentiate between LED and LCD. Write one application each. 4
- b) Differentiate between UPS and inverter. Write one application each. 4
- c) Discuss the role of a filter in a DC power supply. 2
- II. 3) a) Differentiate between : 4
- i) Sones and phons
- ii) Sound pressure level and sound power level.
- b) State and explain Sabine's formula. Mention the techniques used to reduce
'RT'. 4
- c) Define 'Timbre'. Mention the factors determining 'Timbre'. 2
- OR
- 4) a) How does a piezo electric microphone works ? Mention one application. 3
- b) How does a moving coil loudspeaker works ? Why do we require different
loudspeakers for low medium and high frequency sounds. 4
- c) With a neat sketch explain how a '1' and a '0' is written into a CD. Also
mention how the written data is read out. 3

P.T.O.



- III. 5) a) Explain how a flip flop stores a binary digit. 4
b) With a truth table, explain the working of : 4
i) OR gate ii) NAND gate.
c) Define : 2
i) Byte ii) Nibble.

OR

- 6) a) List the secondary memory devices used with a computer. Mention the role of hard disk in the functioning of a computer. 5
b) List the names of (at least) three operating systems. Discuss the functions of an operating system in the working of a computer. 5
IV. 7) a) "A microphone should always be preceded by a preamplifier and a transducer should always be preceded by a power amplifier". Justify. 4
b) With a block schematic explain how an induction loop system works. 4
c) Briefly explain the working of a sinusoidal oscillator. 2

OR

- 8) a) With a block diagram, explain the principle of working of an immittance audiometer. 5
b) What are the different techniques used for analysis of OAE². With a block diagram, illustrate how a DPOAE system functions. 5
V. 9) a) Mention the advantages of converting an analog signal to a digital signal. 5
b) Mention the role of analog to digital converter in a digital hearing aid. How does an A to D converter function ? 5

OR

- 10) a) What is a digital filter ? How is it different from an analog filter ? What are its merits and demerits compared to analog filters ? 5
b) How is digital signal processing advantageous compared to analog signal processing ? Mention (at least) four applications of DSP in the field of speech and hearing. 5