BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR – SEMESTER - II

PAPER IV - AUDIOLOGY

Q.P. Code: 802344

Time: Three Hours Maximum: 75 Marks

Answer All questions

I. Elaborate on: $(2 \times 10 = 20)$

1. AC and BC masking. Explain with purpose, rationale, stimuli and procedure.

2. Principles, procedure and interpretation of Weber and Schwabach tuning fork test.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Purpose and rationale of clinical masking.
- 2. Audiometric version of Bing test and its interpretation.
- 3. Factors affecting air conduction thresholds.
- 4. Loudness scales.
- 5. Procedure and application of speech audiometry.
- 6. Daily listening check and subjective calibration.
- 7. Various configurations of audiograms.
- 8. Define pitch and write about scales of pitch.

III. Short answers on: $(5 \times 3 = 15)$

- 1. Puretone average.
- 2. PIPB function.
- 3. Natal causes for hearing loss.
- 4. Importance of speech audiometry.
- 5. Mel.

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

FIRST YEAR – SEMESTER - II PAPER I – NEUROLOGY

Q.P. Code: 802341

Time: Three Hours Maximum: 75 Marks

Answer All questions

I. Elaborate on: $(2 \times 10 = 20)$

1. Write in detail the organisation of the Nervous system – The different structure and function of various systems.

2. Write in detail about etiology, clinical features and management of Intracerebral Hemorrhage.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Approach to dysarthria.
- 2. Assessment of Language in stroke patients.
- 3. Anatomy of cerebellum.
- 4. Alzheimer's Disease.
- 5. Blood Brain Barrier.
- 6. Multiple sclerosis.
- 7. Hydrocephalus.
- 8. Inborn Errors of metabolism.

III. Short answers on:

 $(5 \times 3 = 15)$

- 1. Pellagra.
- 2. Eighth cranial nerve.
- 3. Inhibitory Post Synaptic Potential.
- 4. Types of Aphasia.
- 5. Encephalitis.

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY FIRST YEAR – SEMESTER - II

PAPER II – OTOLARYNGOLOGY

Q.P. Code: 802342

Time: Three Hours Maximum: 75 Marks

Answer All questions

I. Elaborate on: $(2 \times 10 = 20)$

1. Meniere's disease symptomatology and management.

2. Methods of examination of the larynx and instruments used.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Thyroplasty types, indications and steps.
- 2. Indications for tracheostomy and tracheostomy post operative care.
- 3. Puberophonia management.
- 4. Elaborate on vestibular function tests (Romberg, Tandem Walking and Unterberger)
- 5. Clinical examination of the facial nerve.
- 6. Audiological tests for vestibular schwannoma.
- 7. Describe the clinical features of laryngomalacia.
- 8. Voice restoration after laryngectomy.

III. Short answers on: $(5 \times 3 = 15)$

- 1. Interpret fistula test.
- 2. Enumerate the causes of stridor.
- 3. Gradenigo's syndrome.
- 4. Types of Tympanogram.
- 5. Mention five causes for sensorineural hearing loss.

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY FIRST YEAR – SEMESTER - II

PAPER III – SPEECH – LANGUAGE PATHOLOGY

Q.P. Code: 802343

Time: Three Hours Maximum: 75 Marks

Answer All questions

I. Elaborate on: $(2 \times 10 = 20)$

1. What are the types of articulation and phonological disorders? Who will you assess them?

2. Causes of speech and language disorders.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Types of rewards.
- 2. What is Disability Act? What are the benefits for a person with speech disability?
- 3. Write short notes on community based rehabilitation.
- 4. Write short notes on prevention of language disorder.
- 5. Describe the role of a speech therapist.
- 6. Describe the assessment procedure for voice disorder.
- 7. Describe the management procedures for fluency disorder.
- 8. What are the issues related to bilingualism?

III. Short answers on: $(5 \times 3 = 15)$

- 1. Define incidence and prevalence.
- 2. Definition of impairment.
- 3. What is an interview?
- 4. What is Consumer Protection Act?
- 5. What are referral reports?

PAPER II – ARTICULATION PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time : Three Hours	Maximu	m:100	marks
Answer ALL questions in the same orde I. Elaborate on:	Pages	Time (May)	
1. How do you assess children with articulation disorder? Explain various methods to assess articulation.	(Max.)	(Max.) 20 min.	
2. Explain development of articulation in detail.	7	20 min.	. 10
3. Explain muscle of soft palate, pharynx and velopharyngeal mechanism for the production of speech sounds.	7	20 min.	. 10
II. Write Notes on:			
1. Embriological Development of Palate.	4	10 min.	. 5
2. Oral stereognosis.	4	10 min.	. 5
3. Intelligibility rating scale.	4	10 min.	. 5
4. Metaphon therapy.	4	10 min.	. 5
5. Distinctive feature analysis.	4	10 min.	. 5
6. Sub-mucous cleft.	4	10 min.	. 5
7. Multi-disciplinary management of cleft lip and palate.	4	10 min.	. 5
8. International phonetic alphabet for speech sounds in English.	4	10 min	. 5
III. Short Answers on:			
1. Supra segmental aspects of speech.	2	4 min.	. 3
2. Co-articulation.	2	4 min.	. 3
3. Spectrogram.	2	4 min.	. 3
4. Percentage correct consonants (PCC).	2	4 min.	. 3
5. Pierre-Robins syndrome.	2	4 min.	. 3
6. Glossectomy.	2	4 min.	. 3
7. Short term Goals.	2	4 min.	. 3
8. Fricatives.	2	4 min.	. 3
9. Write IPA for the following words/Ship/, /tape/, /call/.	2	4 min.	. 3
10. Phonological process.	2	4 min.	. 3

PAPER II – ARTICULATION PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Compare and contrast Behaviorist & structuralist model of phonological development.

- 2. Explain the roles and responsibilities of team members involved in the assessment and management of individuals with cleft lip and palate.
- 3. Using any two therapy techniques draft a lesson plain for a child with misarticulation.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Classification of consonants.
- 2. Explain the features of Treacher- Collins Syndrome.
- 3. Explain types of cleft lip and palate.
- 4. Explain the effect of partial and total glossectomy on speech.
- 5. Explain Biological model.
- 6. Explain articulators involved in speech production.
- 7. Describe the physiology of muscles of velum.
- 8. Write short notes on computerized intervention packages.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Define Coarticulation.
- 2. Define spectrogram.
- 3. Spoonerism with an example.
- 4. Maintenance phase of articulation therapy.
- 5. Phonemic awareness.
- 6. Shaping.
- 7. Differentiate Diphthongs and semi vowels.
- 8. Ankyloglossia.
- 9. Assimilation.
- 10. Velopharyngeal Insufficiency.

PAPER II – ARTICULATION PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. What are phonological processes? Give a detailed description of types and age limit for the phonological processes.
- 2. Describe in detail the causes of articulation/phonological disorder.
- 3. "Team approach and professional communication are essential in the management of articulation disorder". Justify the statement.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Explain types of distinctive features.
- 2. Explain any two formal diagnostic test used in assessment of articulation.
- 3. Explain velopharyngeal insufficiency and velopharyngeal inadequacy.
- 4. Draw stripped Y classification for a client with left sided complete cleft of lip & palate.
- 5. Explain paired stimuli approach.
- 6. Describe the effects of glossectomy on swallow.
- 7. What is coarticulation? Explain types of coarticulation.
- 8. Write short notes on cleft palate speech.

III. Short Answers on:

- 1. Manner of articulation.
- 2. Deep test of articulation.
- 3. Canonical babbling.
- 4. Nasal assimilation.
- 5. Associated problems with cleft lip and palate.
- 6. Cul-de-sac resonance.
- 7. Contextual utilization.
- 8. Differentiate motor approaches and cognitive-linguistic approaches of phonological treatment.
- 9. Supra segmental aspects.
- 10. Ear training.

PAPER II – ARTICULATION PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. What are phonological processes? Give a detailed description of its types.

- 2. Draft an assessment protocol for evaluating individuals with articulation Disorder.
- 3. Explain the stages of treatment of articulation/phonological disorder.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Neurogenic causes of articulation disorders.
- 2. Syndromes associated with cleft lip and palate.
- 3. Stages of phonological development.
- 4. Explain the effects of partial and total glossectomy on speech.
- 5. Differentiate motor approaches and cognitive-linguistic approaches of phonological treatment.
- 6. Explain articulators involved in speech production.
- 7. Describe the physiology of velum.
- 8. Write short notes on computerized intervention packages.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Manner of articulation.
- 2. Screening test of articulation.
- 3. Canonical babbling.
- 4. Phonetic placement.
- 5. Associated problems with cleft lip and palate.
- 6. Cul-de-sac resonance.
- 7. Contextual utilization.
- 8. Spectrogram.
- 9. Supra segmental aspects.
- 10. Ear training.

PAPER II – ARTICULATION PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Describe in detail phonological development in typically developing children.
- 2. Explain the roles and responsibilities of team members involved in the assessment and management of individuals with cleft lip and palate.
- 3. Give a detail account of the methods to assess of speech intelligibility.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Oral peripheral mechanism examination.
- 2. Features of Pierre Robin Syndrome.
- 3. Psycho social causes of articulation disorder.
- 4. Explain metaphon therapy.
- 5. Error pattern analysis.
- 6. Stages of articulation therapy.
- 7. Associated problems in children with cleft lip and palate.
- 8. Velopharyngeal mechanism.

- 1. Define Oral stereognosis.
- 2. Explain spoonerism with an example.
- 3. Perceptual analysis.
- 4. Define Voice Onset Time.
- 5. Describe Intonation.
- 6. What is glossectomy?
- 7. Define consonants /s/ and /r/.
- 8. Explain Percentage of consonant correct.
- 9. Differentiate phonetic and phonologic disorders.
- 10. Nasal resonance.

PAPER II – ARTICULATION PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Define articulation. Describe the articulation assessment for children with cleft lip and palate.
- 2. What is glossectomy? Describe its rehabilitative methods.
- 3. Describe in detail the role of SLP in the management of children with phonological disorder.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Write a note on Team management.
- 2. Write a note on Place of articulation.
- 3. Describe the Rehabilitation of swallow in adults with glossectomy.
- 4. What is Metaphon therapy?
- 5. Enumerate on the Instrumental evaluation of articulation.
- 6. Explain the speech characteristics of Down syndrome.
- 7. Write a note on Speech transcription.
- 8. Describe the use of Minimal pair approach.

- 1. Name three approaches to articulation rehabilitation.
- 2. Who are the team members of a cleft team?
- 3. Name three speech intelligibility scales.
- 4. Describe three activities to evaluate the intelligibility in children with articulation disorders.
- 5. What are the principles of articulation therapy?
- 6. Name three characteristics of Down syndrome.
- 7. Name three intervention strategies to manage epenthesis.
- 8. Differentiate between "fronting" and "backing".
- 9. Describe with example the term "distinctive feature".
- 10. What is Mirror fogging test?

PAPER II - ARTICULATION AND PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Define phonology. Critically evaluate the transcription methods in perceptual analysis.

- 2. What is glossectomy? Describe its rehabilitative methods.
- 3. Describe in detail the role of SLP in the management of children with Cleft lip and palate.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Explain Tongue thrust swallow.
- 2. Describe sampling for phonological process analysis.
- 3. Special considerations in the management of Pierre Robin sequence.
- 4. What are the metalinguistic factors affecting articulation and phonology?
- 5. Enumerate on the instrumental evaluation of articulation.
- 6. What are the challenges in management of phonology in children with Down syndrome?
- 7. Enumerate on the computerized intervention of Articulation disorders.
- 8. What are the prosthetic devices for patients with hemiglossectomy?

- 1. Name three traditional approaches to phonology intervention.
- 2. Differentiate between the terms "intra" and "inter" professional communication.
- 3. Principles of metaphon therapy.
- 4. Describe three activities to evaluate the stimulability in children with articulation disorders.
- 5. Name three Indian language test materials to evaluate articulation.
- 6. Name three possible etiologies for tongue thrust.
- 7. Name three intervention strategies to manage velopharyngeal dysfunction.
- 8. Differentiate between any two distinctive features.
- 9. Describe with example the term oral stereognosis.
- 10. Name three articulation characteristics of children with Cerebral palsy.

[LJ 0816] AUGUST 2016 Sub.Code :2312

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR

Paper II – ARTICULATION AND PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain the role and responsibility of team members involved in the assessment and management of individual with glossectomy?

- 2. Write on distinctive features- types, identification of errors and analysis?
- 3. What is metalingusitics? Explain structure, cognitive- linguistic factors related to articulation and phonological disorders.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Psycho social causes of articulation disorders.
- 2. Latest advancement in articulation therapy, uses of computerised intervention.
- 3. Distinctive feature and differentiate between any two distinctive features?
- 4. Velopharyngeal mechanism.
- 5. Type of cleft lip and palate.
- 6. Differences in articulation characteristics of various types of cerebral palsy.
- 7. Error pattern analysis.
- 8. Prosthetic speech appliances for patients with cleft palate.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Define oral stereognosis.
- 2. What is Nasal Flutter test and Mirror flogging test?
- 3. What is Cul- de- sac resonance?
- 4. Explain spoonerism with example.
- 5. What are the stages of articulation treatment?
- 6. What is principle of motokinesthetic treatment approach?
- 7. Describe three activities to evaluate the stimulability in children with articulation disorders?
- 8. Write note on associated problems with cleft lip and palate.
- 9. How to carryout oral peripheral mechanism examination?
- 10. Definition and types of coarticulation.

[LK 0217] FEBRUARY 2017 Sub.Code :2312

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR

Paper II – ARTICULATION AND PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Acoustic analysis of production and perception of speech sounds.

- 2. a) Various factors related to articulation and phonological disorders.
 - b) Characteristics of disordered phonology?
- 3. The subjective and objective assessment of children with cleft lip and palate.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Effect of partial and total Glossectomy.
- 2. Computerized intervention of articulation disorders.
- 3. Team approach and Professional communication.
- 4. Assessment of oral peripheral mechanism and OPME toolkit.
- 5. Distinctive feature therapy vs. Metaphon therapy.
- 6. How are articulation characteristics different for children with Down syndrome and Cerebral palsy?
- 7. Types of cleft lip and palate.
- 8. Prosthetic speech appliances for patients with cleft palate.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Differentiate segmental and suprasegmental aspects.
- 2. Name the velopharyngeal mechanism muscles.
- 3. Define oral stereognosis.
- 4. What is Nasal Flutter test and Mirror flogging test?
- 5. What are the stages of articulation treatment?
- 6. What is principle of motokinesthetic treatment approach?
- 7. Describe few activities to evaluate the stimulability in children with articulation disorders?
- 8. Definition and types of coarticulation.
- 9. Define Nasal air emission and Differentiate Hypernasality and Hyponasality.
- 10. Write on Features of Pierre- Robin Syndrome and Treacher- Colin's Syndrome?

PAPER II – ARTICULATION AND PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain the importance of MIDVAS in treating articulation disorders.

- 2. Explain the types of cleft lip and palate. Draw stripped 'Y' classification for a client with right sided complete cleft of lip and palate.
- 3. What are phonological processes? Give a detailed description of its types.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Fricatives.
- 2. Effects of partial and total glossectomy on speech.
- 3. Oral peripheral mechanism examination.
- 4. Crouzon's syndrome.
- 5. Prosthetic speech appliances for patients with cleft palate.
- 6. Trans-disciplinary approach.
- 7. Spectrogram.
- 8. Metaphon Therapy.

III. Short answers on:

- 1. Physiology of velum.
- 2. Cul-de-sac resonance.
- 3. Phonetic placement.
- 4. Nasalance.
- 5. Percentage of consonant correct.
- 6. Mirror fogging test.
- 7. TONAR.
- 8. Treacher-Collins syndrome.
- 9. Differentiate segmental and suprasegmental aspects.
- 10. Name the velopharyngeal mechanism muscles.

PAPER II – ARTICULATION AND PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Acoustic analysis of production and perception of speech sounds.

- 2. The subjective and objective assessment of children with cleft lip and palate.
- 3. Compare and contrast Behaviorist and structuralist model of phonological development.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Nasals.
- 2. Minimal pair approach.
- 3. Embryological Development of Palate.
- 4. Pierre Robin's syndrome.
- 5. Prosthetic speech appliances for patients with cleft palate.
- 6. Compensatory articulatory errors.
- 7. Differentiate between liquids and trills.
- 8. Computerized intervention packages.

- 1. TONAR.
- 2. Multidisciplinary approach.
- 3. Suprasegmentals.
- 4. Glossectomy.
- 5. Reduplication.
- 6. Palatoplasty.
- 7. Motokinesthetic approach.
- 8. Semivowels.
- 9. Manner of articulation.
- 10. International phonetic alphabet.

PAPER II – ARTICULATION AND PHONOLOGICAL DISORDERS

O.P. Code: 802312

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain distinctive features and analyse the distinctive features for /p/ and /s/.

- 2. Explain the factors related to articulation and phonological disorders.
- 3. Explain any therapeutic approach for a child with phonological disorder and draft a lesson plan for the same.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Plosives.
- 2. Oral stereognosis.
- 3. Phonetic and phonological disorders.
- 4. Treacher Collins syndrome.
- 5. Sub-mucous cleft.
- 6. Phonological processes.
- 7. Transcription methods.
- 8. MIDVAS.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2312

- 1. Speech bulb.
- 2. Passavant's ridge.
- 3. Metathesis.
- 4. Ankyloglossia.
- 5. Modified tongue anchored procedure.
- 6. Stimulability.
- 7. Paired-stimuli approach.
- 8. Assimilation.
- 9. Spectrogram.
- 10. Velopharyngeal insufficiency.

PAPER II - ARTICULATION AND PHONOLOGICAL DISORDERS

Q.P. Code: 802312

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Anatomy and physiology of velum.

- 2. Assessment of resonance including subjective and objective.
- 3. Treatment procedures for speech including surgical repair of cleft lip and palate.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Assessment of oral peripheral mechanism.
- 2. Effects of swallow.
- 3. Rehabilitation of speech in glossectomy.
- 4. Intelligibility of speech.
- 5. Acoustic aspects of vowels.
- 6. Motokinesthetic and Minimal contrast therapy.
- 7. Associated problems in individuals with cleft palate.
- 8. Computerized intervention packages.

- 1. Phonemic awareness.
- 2. Describe intonation.
- 3. Spoonerism with an example.
- 4. Explain percentage of consonant correct.
- 5. Nasal resonance.
- 6. Contextual utilization.
- 7. Explain spectrogram.
- 8. Deep test of articulation.
- 9. Fricatives.
- 10. Perceptual analysis.

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain in details of the Importance and Scope of Statistics.

2. Calculate the Mean Median and Mode for the following data:

Age (in years)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of Persons	20	25	32	40	42	35	10	8

3. Explain in details the method of sampling procedures.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Explain Origin and Scope of Statistics
- 2. Define Scale measurements of statistical data.
- 3. Define: (i) Probability. (ii) Sample Space. (iii). Mutually exclusive events.
- 4. Procedure and Assumptions of testing hypothesis.
- 5. Define Ethics of research in behavioural sciences.
- 6. Define Correlation and Regression.
- 7. Definition of Standard deviation and Standard errors.
- 8. Define the Parametric and Non Parametric Methods

- 1. What is coefficient of Variation?
- 2. Define Small and Large samples
- 3. Define Normal Curve
- 4. What is Hypothesis?
- 5. What is Primary and Secondary data?
- 6. Advantages Parametric test
- 7. Disadvantage of Non parametric test
- 8. What is Type I and Type II Errors
- 9. Define Rank Correlation
- 10. What is Research?

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Describe the different measures of central tendency and compare their merits.

- 2. Discuss the various research designs used in Audiology and Speech Language Pathology Studies.
- 3. Calculate the product moment correlation coefficient between age and hearing levels (average of three frequencies) and interpret.

Age (year)	30	40	50	60	70
Hearing level (dB)	25	35	40	45	55

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss application of statistics to speech and hearing.
- 2. Bring out the various scales of measurement.
- 3. It is known that 10% of children in a town have learning problems. If a sample of two children is taken, calculate the probability that (a) both have learning problem.
 - (b) none have learning problem (c) one has and one does not have the problem.
- 4. State the properties of Normal Distribution.
- 5. When will you use t test of significance?
- 6. The ages of 10 children with sensory-neural hearing loss are given below. Determine the median and mode.

7, 8, 6, 5, 9, 5, 10, 12, 9, 13

- 7. Write briefly on methods of data collection.
- 8. What does the linear regression coefficient denote? Illustrate with an example.

III. Short Answers on:

- 1. What are the two meanings of Statistics?
- 2. How will you draw Frequency Curve?
- 3. Define Probability.
- 4. How is the Null Hypothesis stated?
- 5. Mention the Types of variables.
- 6. When will you use bar diagram?
- 7. Define Type I error.
- 8. What is behavioural measure?
- 9. Define Average Deviation.
- 10. What is Skewness?

[LF 0215]

AUGUST 2014

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

SECOND YEAR

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Bring out the need for measure of central tendency & compare the different measures.

- 2. Discuss the parameters for scientific research in Audiology and Speech Language Pathology Studies.
- 3. Calculate rank correlation coefficient between scores in audiology and in speech pathology of 10 candidates.

Audiology Score	33	46	58	66	72	85	28	42	55	64
Speech Pathology Score	25	38	47	57	55	77	43	55	67	73

II. Write notes on: $(8 \times 5 = 40)$

- 1. Bring out difference between descriptive statistics and inferential statistics.
- 2. What are the various scales of measurement?
- 3. It is known that 20% of the elderly in a town are hard of hearing. If a sample of two elderly persons is taken, calculate the probability that
 - (a) both are hard of hearing,
 - (b) one is hard of hearing and the other is not and
 - (c) none is hard of hearing.
- 4. Explain the meanings of Type I and Type II errors.
- 5. Write about measurement procedure in Speech Pathology.
- 6. What are the different types of hypothesis?
- 7. Briefly write about any two research designs.
- 8. Bring out the components of research article.

III. Short Answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2317

- 1. Define Statistics.
- 2. How will you choose class interval?
- 3. Define Probability.
- 4. How is the Null Hypothesis stated?
- 5. Mention the Types of variables.
- 6. Define Standard Deviation.
- 7. What is Skewness?
- 8. How will you interpret correlation coefficient?
- 9. What does standard error indicate?
- 10. What is behavioural measure?

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Describe the various measures of central tendency and compare their merits.

- 2. Discuss the steps used in research methods in Audiology and Speech Language Pathology Studies.
- 3. Use the following data to find out if exposure to infectious disease is associated with developing hearing loss. (5% level of χ 2 distribution with 1 degree of freedom = 3.84)

	Had hearing loss	Had no hearing loss
Exposed to infectious disease	30	20
Not exposed to infectious disease	10	40

II. Write notes on: $(8 \times 5 = 40)$

- 1. Mention application of statistics to speech and hearing.
- 2. What are the types of variable?
- 3. State the properties of Normal Distribution.
- 4. When will you use F test of significance?
- 5. Briefly state the need for scientific enquiry.
- 6. What are the ways of stating research topic?
- 7. Write briefly on two methods of data collection.
- 8. Distinguish between type I error and type II error.

III. Short Answers on:

- 1. Define Statistics.
- 2. Write an example of discrete measurement.
- 3. Which diagram will help in calculating median and quartiles?
- 4. Define Probability.
- 5. Define Sample.
- 6. Give an example of Null Hypothesis.
- 7. How will you interpret correlation coefficient?
- 8. When will you use bar diagram?
- 9. What is behavioural measure?
- 10. When is Ex post-facto design used?

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain in detail the documentation of research.

2. Discuss the role Descriptive and Inferential statistics in Speech and hearing research.

3. Find mean and SD for the following 1000 children with birth weight

Birth weight	1000-1500	1500-2000	2000-2500	3000-3500	3500-3500	3500-4000
F	15	55	280	450	150	50

II. Write notes on: $(8 \times 5 = 40)$

- 1. Types of data.
- 2. Frequency Distribution.
- 3. Normal Distribution.
- 4. Type I and Type II error, Standard error.
- 5. Rank correlation for repeated and not repeated ranks.
- 6. Types of Hypothesis.
- 7. Behavioural measures and recording procedures.
- 8. Probability sampling methods.

III. Short Answers on:

- 1. Scales of measurement.
- 2. Emperical relationship of mean, median and mode.
- 3. Range and its coefficient.
- 4. Skewness and Kutosis.
- 5. Addition law of probability.
- 6. Experimental design.
- 7. Snowball sampling.
- 8. Quality of scientific clinician.
- 9. Product moment correlation.
- 10. Reference Style in an article.

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Explain in detail the research methods and designs needed for clinical population and Community research.
- 2. Discuss on general properties of normal distribution and area under the curve with examples.
- 3. Calculate mean, median, mode for diastolic BP in males aged 25-34 given below:

B.P	70-75	75-80	80-85	85-90	90-95	95-100
No. of males	6	18	46	17	6	2

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Scales of Measurement.
- 2. Collection of Data.
- 3. Types of Correlation.
- 4. Formulation of hypothesis.
- 5. Classification of data.
- 6. Limitations of Statistics.
- 7. Sampling Techniques.
- 8. Ethics in Research.

III. Short Answers on:

- 1. Descriptive Statistics.
- 2. Datum, Class interval, Class frequency, class width.
- 3. Rank correlation.
- 4. Standard error.
- 5. Coefficient of variation.
- 6. Components of Research article.
- 7. Types of Variables.
- 8. Population and sample, Sampling frame.
- 9. Parameter and Statistic.
- 10. Statement of a research question.

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Discuss the various method of collecting data.

- 2. Explain the concept of variability and its different types of measurements.
- 3. Explain in detail about the need of skewness and its types.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Differentiate between descriptive statistics and Inferential Statistics.
- 2. Discuss the advantages and disadvantages of using secondary data.
- 3. Explain the need of graphs in representation of data.
- 4. Why it is necessary to have different types of central tendency? Justify.
- 5. Discuss about the need of probability and its related concepts.
- 6. Explain the concept of skewness and its types.
- 7. Discuss the test procedure for 't' test.
- 8. Calculate the arithmetic mean for the following data.

X:	0-7	7-14	14-21	21-28	28-35	35-42	42-49
F:	6	15	25	41	36	18	10

III. Short answers on:

- 1. How statistics is used in today's medical field?
- 2. What are the measures of descriptive statistics?
- 3. State the importance of data.
- 4. Define Range and coefficient of range.
- 5. State the advantages of diagrams in medical sciences.
- 6. Define Kurtosis.
- 7. Define Conditional Probability.
- 8. Mention different non-parametric tests that are used in health statistics.
- 9. Define correlation with an example.
- 10. State the situation to use 'F' test in health science analysis.

Sub. Code: 2317

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain the importance of statistics with applications to speech and hearing.

- 2. Discuss about the measures of central tendency.
- 3. Explain about correlation and its types in detail.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss about descriptive statistics.
- 2. Explain about the classification of data.
- 3. State the importance of diagrams in representation of statistical data.
- 4. State the properties of normal distribution.
- 5. Explain about the theory of probability.
- 6. Discuss about the concept of kurtosis.
- 7. Explain about type I and type II errors.
- 8. Explain the procedure for F test.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Define Statistics.
- 2. State the applications of statistics in health sciences.
- 3. Define the normal, ordinal scale of measurements.
- 4. What do you mean by primary data?
- 5. Define Dispersion.
- 6. Define Skewness.
- 7. What do mean by Non-Parametric statistics?
- 8. Define about correlation coefficient.
- 9. State the situation to use Rank Correlation.
- 10. What do you understand by level of significance?

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Define the probability and non-probability sample techniques.

- 2. Write in detail about Ex-post facto research design with example.
- 3. A study was performed comparing the bone formation of individuals undergoing a new therapy and conventional therapy. Test whether the bone formation rate is different among the two groups at 5% level of significance? ($t_{val}(30df)=2.04$)

	Conventional therapy	New therapy (n=16)
	(n=16) mean±sd	mean±sd
Bone-formation rate	33±16	95±32

sd = standard deviation

II. Write notes on: $(8 \times 5 = 40)$

- 1. Measurement scale.
- 2. Explain secondary data with example.
- 3. Find the mean, median and mode of the following data 24, 28, 20, 28, 36, 37, 36, 50, 80, 28
- 4. Correlation and its types.
- 5. Advantage and disadvantage of non-parametric test.
- 6. Explain the concept of standard error.
- 7. Concept of behavioural measures with example.
- 8. Normal distribution and its properties.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2317

- 1. Definition of statistics.
- 2. Define mean, median and mode.
- 3. Null and alternative hypothesis.
- 4. Uses of F-test.
- 5. Conditional probability.
- 6. One-sided test with example.
- 7. How to construct a scatterplot with example?
- 8. Define z-score.
- 9. Formulation of hypothesis.
- 10. Advantage and disadvantages of sampling.

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Role of statistics in the field of audiology and speech language pathology.

2. Elaborate on experimental research design with example.

3. A study of comparing the impact of hearing loss in the life of adults who had congenital hearing loss with that of adults with acquired adult onset hearing loss was conducted. Find whether there is any association between gender of the patient and the hearing loss type at 5% level of significance ($\chi^2(1df)=3.84$)

	Congenital hearing loss	Acquired adult onset
		hearing loss
Male	70	30
Female	60	40

II. Write notes on: $(8 \times 5 = 40)$

- 1. Define population, sample and sampling frame with example.
- 2. Procedure of paired-t-test.
- 3. Type I and Type II error.
- 4. Define mean, median and mode.
- 5. Use of graphical representations.
- 6. Construct a continuous frequency distribution with an interval of 10 for the following data.

31	13	46	31	30	45	38	42	30	9	30	30
46	36	2	41	44	18	29	63	44	30	19	5
44	15	7	25	12	30	6	22	24	37	15	6
39	32	21	20	42	31	19	14	23	28	17	53
22	21										

- 7. Ethics of research in behavioural sciences.
- 8. Explain stratified sampling technique and give an example.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Standard deviation and variance.
- 2. Marginal probability.
- 3. Compute CV of the data given: 4, 8, 2, 8, 6, 7, 3, 5, 8, 10.
- 4. Mention non-parametric test alternative to independent t-test and paired t-test.
- 5. Define correlation with example.
- 6. What is spearman's rank correlation?
- 7. What are large sample tests?
- 8. Define non-probability sampling with example.
- 9. Define hypothesis and its types.
- 10. Statement of research problem.

PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain the importance of statistics with applications to speech and hearing.

- 2. Bring out the Characteristics of Normal Distribution.
- 3. Use the following data to find out if exposure to infectious disease is associated with developing hearing loss. (5% level of χ 2 distribution with 1 degree of freedom = 3.84)

	Had hearing loss	Had no hearing loss
Exposed to infectious disease	30	20
Not exposed to infectious disease	10	40

II. Write notes on: $(8 \times 5 = 40)$

- 1. Distinguish between Bar diagram and Histogram.
- 2. State Addition and multiplication theorems of probability.
- 3. In series of Boys, the mean systolic blood pressure was 120 and standard deviation was 10. In the same series mean height and standard deviation were 160 cm and 5 cm respectively. Find which character shows greater variation?
- 4. Importance of Reliability and Validity in Research Process.
- 5. Coefficient of variation.
- 6. What are the ways of stating research topic?
- 7. Write about study designs in research methods.
- 8. Ethics in Research.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Mention application of statistics to speech and hearing.
- 2. Briefly state the need for scientific enquiry.
- 3. Prevalence and Incidence.
- 4. Components of Research article.
- 5. Nominal and ordinal data.
- 6. Define z-score.
- 7. What is Skewness?
- 8. Define Rank Correlation.
- 9. Define Normal Curve.
- 10. Reference Style in an article.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

SECOND YEAR

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time : Three Hours	Movimu	m · 100	morke
Answer ALL questions in the same order	Maximum: 100 marks		
I. Elaborate on:	Pages	Time (Max.)	
1. The need for test battery approach in Audiological diagnosis for cochlear pathology. Write three pure tone tests you will do for the same.	7	20 min.	
2. Immittance audiometry & the clinical application of it in case of unilateral neural hearing Loss.	7	20 min.	10
3. Instrumentation, test procedure &factors affecting auditory brainstem responses.	7	20 min.	10
II. Write notes on:			
1. Classification of oto acoustic emissions & measurement of oto acoustic emissions procedures & interpretation of test results.	4	10 min.	5
2. Electrocochleography- its valid usage in differential diagnosis.	4	10 min.	
3. ANY three dichotic speech tests.	4	10 min.	
4. Need for speech audiometry. Procedure to obtain speech reception threshold, speech identification sore.	4	10 min.	5
5. RECRUITMENT phenomenon, loudness balance tests.			
6. Reflexometry and the special tests in reflexometry.	4	10 min.	5
7. Vestibular testing –modern trend in vestibular testing.	4	10 min.	5
8. Variables influencing central auditory assessment.	4	10 min.	5
III. Short Answers on:			
1. Minimal auditory capability test.	2	4 min.	3
2. Test findings in subjects with brainstem lesions.	2	4 min.	3
3. Binaural fusion test.	2	4 min.	3
4. Dichotic speech test of staggered spondaic word test.	2	4 min.	3
5. Lombard test – when do you administer it?	2	4 min.	3
6. Middle latency response and late latency response - their clinical applications.	2	4 min.	3
7. PI-PB function –its usage.	2	4 min.	3
8. Write about social adequacy index.	2	4 min.	3
9. Static immittance and how do gradient/ tympanometric width aid in diagnosis?	2	4 min.	
10. Brief tone audiometry – specify the current trend in brief tone audiometry.	2	4 min.	3

PAPER IV - DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain Test battery approach in auditory diagnosis and integration of results.

- 2. What are auditory evoked potentials? Explain the classification of auditory evoked potentials.
- 3. What is pseudo hypoacusis? How do you assess and individual with unilateral functional hearing loss?

II. Write notes on: $(8 \times 5 = 40)$

- 1. Short increment sensitivity index test.
- 2. Bekesy audiometry.
- 3. Acoustic reflex pathway.
- 4. Electro cochleography.
- 5. Speech in noise test.
- 6. Filtered speech test.
- 7. Interpretation for alternate binaural loudness balance test.
- 8. Instrumentation for recording otoacoustic emissions.

- 1. Adaptation.
- 2. Cochlear amplifiers.
- 3. Strenger's principle.
- 4. Contra lateral effect.
- 5. Need for speech audiometry.
- 6. Definition of Central auditory processing disorders.
- 7. Pitch pattern test.
- 8. Factors affecting long latency responses.
- 9. Test materials for speech audiometry available in Indian languages.
- 10. Application of auditory evoked potentials.

PAPER IV - DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain Instrumentation required for speech audiometry in detail.

- 2. Write the protocol for recording auditory brainstem responses on 6 month old infant.
- 3. How do you differentiate and interpret various pathologies using tympanometry?

II. Write notes on: $(8 \times 5 = 40)$

- 1. Most comfortable level.
- 2. Monaural low redundancy tests.
- 3. Interpretation of Bekesy audiometry.
- 4. Electrode montage for recording auditory evoked potentials.
- 5. Speech in noise test.
- 6. Positional tests.
- 7. Ipsilateral and contra lateral reflex testing.
- 8. Jewett peaks and its origin in Auditory brainstem responses.

- 1. Temporal integration.
- 2. Acoustic reflex.
- 3. Tympanometric width.
- 4. Middle latency responses.
- 5. Time compressed speech test.
- 6. Inter hemispheric dysfunction.
- 7. Cortical deafness.
- 8. Speech detection threshold.
- 9. Uncomfortable level.
- 10. Instrumentation for recording otoacoustic emissions.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Critically evaluate special tests with respect to its sensitivity and specificity. And design a test battery to evaluate retrocochlear pathologies.

- 2. What are various types of tympanogram and explain them with respect to middle ear physiology?
- 3. Name any two tests available for the assessment of distal portion of auditory nerve and describe them.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Explain instrumentation for Bekesy audiometry with a neat diagram.
- 2. Acoustic reflex pathway.
- 3. Lombard reflex test.
- 4. SPAR test.
- 5. PGSR test critically evaluate its application.
- 6. Auditory development of dichotic listening.
- 7. Screening test protocol for ABR in children.
- 8. Clinical implication of long latency responses.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Strenger test.
- 2. Speech test for functional hearing loss in children.
- 3. Compound Action potential.
- 4. Acoustic susceptance.
- 5. SCAN test.
- 6. VEMP test.
- 7. Binaural interaction tests.
- 8. Cochlear integration.
- 9. Types of Bekesy audiomety patterns and its implications.
- 10. Olivocochlear bundle and its function.

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Construct a test battery to assess auditory cortical functions in adults. Justify them.

- 2. How objective tests are superior to subjective tests in assessment of pseudohypocusis? Explain them in detail.
- 3. Explain concept of impedance in detail.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Carhart's tone decay test.
- 2. Dichotic digit test.
- 3. Fowlers test.
- 4. Neurodiagnostic application of ABR.
- 5. Instrumentation for impedance audiometry.
- 6. Explain Reflex decay test with its usefulness.
- 7. Speech in noise test.
- 8. Compare and contrast TEOAE and DPOAE.

- 1. Types of recruitment.
- 2. Amount of tone decay.
- 3. Resistance.
- 4. What is reflex adaptation?
- 5. Binaural fusion test.
- 6. Pioneers in the field to develop CAPD test.
- 7. High level SISI.
- 8. Jewett Peaks.
- 9. Endogenous potentials.
- 10. Cochlear microphonics.

PAPER IV - DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain masking procedure for speech audiometry in detail.

- 2. Compare the protocols and factors affecting long latency responses and auditory brainstem responses.
- 3. Describe various tests to identify brain stem lesions.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Stranger test.
- 2. Filtered speech test.
- 3. Fowlers test.
- 4. Speech identification scores.
- 5. PI- PB function.
- 6. Plateau method.
- 7. Brief Tone audiometry.
- 8. Middle latency response.

- 1. Articulation index.
- 2. Signal to noise ratio.
- 3. Differential amplification.
- 4. Kemp echos.
- 5. Delayed auditory feedback test.
- 6. Psychogenic causes of hearing loss.
- 7. Name monoaural low redundancy test.
- 8. Dichotic stimulus presentation.
- 9. Test developed in India for speech audiometry.
- 10. Contralateral acoustic reflex.

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Explain various tests available to evaluate cochlear functioning.
- 2. Explain the concept of immitance.
- 3. Justify the need for test battery approach and explain its importance in assessment of central auditory processing disorders.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Brief tone audiometry.
- 2. Reflex adaptation test.
- 3. Factors affecting long latency responses.
- 4. Vestibular evoked myogenic potentials.
- 5. Speech in noise test.
- 6. Rapid alternating speech test.
- 7. Lip reading test.
- 8. Different types of tympanograms.

- 1. Fourier analysis.
- 2. Temporal Integration.
- 3. Monoaural loudness balance test.
- 4. Limitations of speech audiometry.
- 5. Instrumentation of Distortion product otoacousitic emissions block diagram.
- 6. Stimulation rate.
- 7. Time window.
- 8. Temporal ordering tasks.
- 9. Subtle principle.
- 10. Stranger principle.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. List and explain tests for temporal processing.

- 2. Explain Principle of Immittance with suitable graphs.
- 3. Write notes on types of OAE and give its clinical application.

II. Write notes on: $(8 \times 5 = 40)$

- 1. State and explain the tests for adaptation.
- 2. Justify the need for test battery approach with its advantages and disadvantages.
- 3. Give the protocol for ABR recording.
- 4. Write notes on Electronystagmography.
- 5. Give the clinical application of ECochG.
- 6. Write notes on dichotic speech test.
- 7. Give the clinical application of immitance audiometry.
- 8. What is articulation index? Give its clinical significance.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Define Central Auditory Processing.
- 2. List the tests for functional hearing loss.
- 3. Classify the CAPD tests based on sensitivity to identify the Brainstem and cortical lesions.
- 4. How will you interpret Multicomponent tympanometry?
- 5. State the clinical application of ABR.
- 6. State Stenger's principle.
- 7. Toynbee procedure for Eustachian tube dysfunction.
- 8. Mention the special test to identify cochlear pathology.
- 9. State the factors that affect higher order potentials.
- 10. When will you perform speech masking? Illustrate with example.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER IV – DIAGNOSTIC AUDIOLOGY

O.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Give the protocol for ABR procedures and give its clinical application.

- 2. "Middle ear system is a complex system" Justify this statement with the understanding the principle of immittance.
- 3. List and explain the Dichotic tests for central auditory processing.

II. Write notes on: $(8 \times 5 = 40)$

1. Explain the need for test battery approach and its importance in differential diagnosis.

- 2. Name the audiological tests to rule out Functional hearing loss. Describe the possible results under each test.
- 3. "Speech audiometry is important diagnostic procedure in audiological evaluation". Justify the statement with suitable clinical conditions.
- 4. Describe the procedure and interpretation of Eustachian tube dysfunction.
- 5. Explain caloric test.
- 6. Mention the tests of adaptation. Explain their procedure and interpretation.
- 7. Write notes on types of OAE.
- 8. List and describe in brief the tests for monoaural low redundancy.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2314

- 1. Types of tymapanogram give the middle ear pathologies associated with each type.
- 2. What is tympanometric peak pressure?
- 3. What is Roll over phenomenon? Mention the formula and criteria for differential diagnosis.
- 4. Name the special tests that help in differential diagnosis for Retro-cochlear pathology.
- 5. Mention the clinical application of late latency response potentials.
- 6. State the subject related factors that affect evoked potentials.
- 7. What is Lombard effect?
- 8. Give the clinical application of OAE.
- 9. Mention the classification for CAPD tests based on the process assessed.
- 10. Explain speech in noise test.

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain various tests available to evaluate cochlear functioning.

- 2. Explain the concept of Immittance.
- 3. Justify the need for test battery approach and explain its importance in assessment of central auditory processing disorders.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Brief tone audiometry.
- 2. Reflex Decay Test.
- 3. Factors affecting long latency responses.
- 4. Neurodiagnostic applications of ABR.
- 5. Speech in noise test.
- 6. Rapid alternating speech test.
- 7. Lip reading test.
- 8. Different types of tympanograms.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Fourier analysis.
- 2. Temporal Integration.
- 3. Monoaural loudness balance test.
- 4. Limitations of speech audiometry.
- 5. Instrumentation of Distortion product otoacoustic emissions block diagram.
- 6. Stimulation rate.
- 7. Time window.
- 8. Temporal ordering tasks.
- 9. Subtlety principle.
- 10. Stenger principle.

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Construct a test battery to assess functional hearing loss in adults.

- 2. Compare protocols and factors affecting long latency responses and auditory brainstem responses.
- 3. Describe various tests to identify brain stem lesions.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Types of OAEs.
- 2. Filtered speech test.
- 3. Fowlers test.
- 4. Speech identification scores and its clinical applications.
- 5. PI- PB function.
- 6. Plateau method.
- 7. Clinical applications of Bekesy Audiometry.
- 8. Middle latency response.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Articulation index.
- 2. Signal to noise ratio.
- 3. Differential amplification.
- 4. Kemp echos.
- 5. Delayed auditory feedback test.
- 6. Psychogenic causes of hearing loss.
- 7. Name monoaural low redundancy test.
- 8. Dichotic stimulus presentation.
- 9. Test developed in India for speech audiometry.
- 10. Contralateral acoustic reflex.

Sub. Code: 2314

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Design a test battery to differentiate Cochlear vs Retrocohlear pathology.

- 2. Various types of tympanograms and its clinical correlation with middle ear pathologies.
- 3. Principle, procedure and clinical interpretation of any two speech tests to detect Pseudohypocusis.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Bekesy audiometry.
- 2. Stapedial reflex pathway.
- 3. Protocol for ABR threshold estimation in children and adults.
- 4. Clinical implications of MLR.
- 5. Usefulness of multifrequency tympanograms.
- 6. Caloric Test.
- 7. Doerfler Stewart Test.
- 8. Variables influencing central auditory assessment.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. MCL.
- 2. Social adequacy index.
- 3. Dynamic Range.
- 4. Functions of Eustachian tube.
- 5. Precautions in performing immittance test.
- 6. Binaural hearing.
- 7. Jewett peaks.
- 8. Cochlear microphonics.
- 9. Binaural Fusion test.
- 10. Role of utricle and saccule in balance.

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Objective vs Subjective tests – importance in assessment of functional hearing loss.

- 2. Protocol for LLR and its clinical applications.
- 3. Signs, symptoms and dichotic speech tests of CAPD.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Breiftone audiometry.
- 2. Reflex decay test with its clinical application.
- 3. TEOAE vs DPOAE.
- 4. Any one test for recruitment.
- 5. Classification of AEPs.
- 6. Electronystagmography.
- 7. Protocol for neurodiagnosis using ABR.
- 8. SPIN Test.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Multi component tympanogram.
- 2. Effect of rate on ABR.
- 3. Tonotopic organization in basilar membrane.
- 4. Importance of efferent auditory pathway.
- 5. Ipsilateral acoustic reflex pathway.
- 6. Temporal integration.
- 7. Latency.
- 8. Lever action in middle ear.
- 9. Need for speech audiometry.
- 10. Hair cells.

Sub. Code: 2314

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER IV – DIAGNOSTIC AUDIOLOGY

Q.P. Code: 802314

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Construct a central auditory test battery to assess a 10 year old child who has difficulty in listening in class room and justify them?

- 2. Objective vs subjective tests importance in assessment of functional hearing loss.
- 3. Mention the test procedures that can be conducted using immittance audiometry and explain each in brief.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Jerger box patterns in reflexometry.
- 2. Vestibular evoked myogenic potentials.
- 3. STAT.
- 4. SPAR Test.
- 5. Clinical implications of LLR.
- 6. PI PB function.
- 7. MLD.
- 8. Eletrocochleography.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Auditory closure.
- 2. Contralateral acoustic reflex pathway.
- 3. Types of recruitment.
- 4. Tonotopic organization in basilar membrane.
- 5. Lip reading test.
- 6. Semi circular canal.
- 7. UCL.
- 8. Importance of efferent auditory pathway.
- 9. Effect of low redundancy in CAPD.
- 10. ABLB.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321] MARCH 2021 Sub. Code: 2314

(AUGUST 2020 EXAM SESSION)

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR (Regulation 2010-2011)

PAPER IV – DIAGNOSTIC AUDIOLOGY O.P. Code: 802314

Q.1. Couc. 002017

Time: Three hours Answer ALL Questions Maximum: 100 Marks

I. Elaborate on: $(3 \times 10 = 30)$

1. Write the protocol for recording auditory brainstem responses on 6 month old infant.

- 2. Explain concept of impedance in detail.
- 3. Justify the need for test battery approach and explain its importance in assessment of central auditory processing disorders.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Brief tone audiometry.
- 2. Rapid alternating speech test.
- 3. Vestibular evoked myogenic potentials.
- 4. Give the protocol for ABR recording.
- 5. Write notes on dichotic speech test.
- 6. Write notes on types of OAE.
- 7. List and describe in brief the tests for monaural low redundancy.
- 8. Factors affecting long latency responses.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Temporal Integration.
- 2. Signal to noise ratio.
- 3. Kemp echoes.
- 4. Contralateral acoustic reflex.
- 5. Precautions in performing immittance test.
- 6. Role of utricle and saccule in balance.
- 7. Jewett peaks.
- 8. Functions of Eustachian tube.
- 9. Binaural hearing.
- 10. Multi component tympanogram.

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Q.P. Coae: 802316			
Time: Three Hours	Maximu	m:100	marks
Answer ALL questions in the same orde			
I. Elaborate on:	_		Marks
1. The need for hearing screening in school children and	(Max.)	(Max.)	(Max.)
the tests used.	7	20 min	. 10
2. The signs/symptoms, screening tests used to assess Central Auditory Processing Disorders in children.	7	20 min	. 10
3. Auditory development from 0-2 years.	7	20 min	. 10
II. Write notes on:			
1. Reinforcement audiometry techniques used to assess		10	_
hearing in infants.	4	10 min	
2. Screening for hearing loss using High Risk Register.	4	10 min	
3. Auditory Brainstem Response in children.	4	10 min	_
4. Causes of hearing loss in children.	4	10 min	. 5
5. Treacher Collins Syndrome.	4	10 min	. 5
Signs and symptoms of Functional Hearing Loss and tests to assess it in children.	4	10 min	. 5
7. Tympanometry and Acoustic Reflex testing in children			
with middle ear pathologies.	4	10 min	. 5
8. Responses of a fetus to sound stimulus.	4	10 min	. 5
III. Short Answers on:			
1. Hearing loss as a "Handicap".	2	4 min	. 3
2. Speech Recognition Threshold.	2	4 min	. 3
3. Noise levels in the Intensive Care Unit.	2	4 min	. 3
4. Normal Auditory localization responses noted in			
a 6 month old infant.	2	4 min	. 3
5. Tangible Reinforcement Operant Conditioning			
Audiometry (TROCA).	2	4 min	. 3
6. Binaural Synthesis and Binaural Separation.	2	4 min	. 3
7. Use of Ear Canal Physical Volume Test.	2	4 min	. 3
8. Oto acoustic emission and Auditory Brainstem			
Response findings in Auditory Neuropathy.	2	4 min	. 3
9. Ear symptoms in a child with Down Syndrome.	2	4 min	. 3
10. Neuroplasticity in the brain.	2	4 min	. 3

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Embryological development of inner ear.

- 2. The importance of early identification and intervention of hearing loss.
- 3. The objective and subjective evaluation for functional hearing loss in children.

II. Write notes on: $(8 \times 5 = 40)$

- 1. The importance of case history.
- 2. Glendnonald Auditory Screening procedure & early speech perception test.
- 3. The procedure involved in visual reinforcement audiometry.
- 4. The concept of universal hearing screening.
- 5. The importance of TEOAE & DPOAE in hearing screening.
- 6. The symptoms of auditory processing disorders in children.
- 7. The Non- Genetic causes of hearing loss.
- 8. The stimulus and recording parameters required for threshold estimation through ABR.

- 1. Crib-o-gram.
- 2. Congenital perinatal infections.
- 3. Pseudohypacusis & write down the behavioural signs of it.
- 4. BC speech audiometry.
- 5. Importance of follow up in hearing screening.
- 6. Speech detection test in children.
- 7. Ushers syndrome.
- 8. Importance of tympanometry in hearing screening.
- 9. Tangible reinforcement operant conditioning audiometry.
- 10. Define central auditory processing. What are the processes involved in it.

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. The importance of OAE and ABR in neonatal hearing screening.

- 2. The various tests to obtain speech threshold in children.
- 3. How to evaluate a 3 month old infant with a high risk for hearing loss.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Role of early identification and intervention with specific reference to sensorineural hearing loss.
- 2. Importance of school screening.
- 3. The test and materials used to obtain speech reception threshold in children.
- 4. Tests available to evaluate a child with Non-organic hearing loss.
- 5. The pros and cons of visual reinforcement audiometry?
- 6. What is acoustic reflex threshold? Write down the usefulness of reflexometry in hearing screening.
- 7. Phylogeny of inner ear.
- 8. Monaural low redundancy speech test.

III. Short Answers on:

 $(10 \times 3 = 30)$

- 1. Apgar Score.
- 2. Clinical features of waardenburg syndrome.
- 3. Neo natal hearing.
- 4. The type of behavioural responses for 7-9 month old infant.
- 5. The modes of operant conditioning?
- 6. Optimal period. Why is it important?
- 7. The clinical application of ABR in children.
- 8. The clinical characteristics of transient evoked to acoustic emission.
- 9. Early speech perception test.
- 10. Difference between sensitivity and specificity.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Discuss the use of high risk registers while screening hearing loss. Write a note on any one register developed in India.

- 2. Explain the following: a) CORA b) TROCA.
- 3. Explain functional hearing loss in children with its signs and symptoms. Detail any two tests to find functional hearing loss in children.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Describe the development of inner ear.
- 2. Discuss the role of ABR in screening and diagnosis of hearing loss in children.
- 3. Describe the principle behind VRA. Explain its procedure in detail.
- 4. Early identification of conductive hearing loss is important. Justify this statement.
- 5. Write in detail about the behavioural screening tests used in audiology clinic.
- 6. Discuss the concept of universal hearing screening.
- 7. Discuss the factors affecting speech audiometry results in children.
- 8. What are the signs and symptoms of Central Auditory Processing Disorder? Mention any two screening tests used for it.

III. Write answers on:

 $(10 \times 3 = 30)$

- 1. Pre Natal hearing behaviour.
- 2. Auditory behavior development from 0-3 months.
- 3. Bottle feeding tests.
- 4. Advantages of VRA over BOA.
- 5. Write in short about the procedure of conditioning audiometry in children.
- 6. What is the procedure to screen hearing sensitivity during school screening program?
- 7. Compare and contrast: Behavioural hearing screening tests Vs Objective hearing screening tests.
- 8. Mention the advantages of inclusion of ABR in testing paediatric population.
- 9. Mention the objective screening tests and its implications.
- 10. Write short notes on Speech Recognition Threshold (SRT).

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Write an essay on development of auditory behavior till the age of 2 years.

- 2. Discuss the role of ABR and OAE in screening and diagnosis of hearing loss.
- 3. Explain CAPD and its symptoms. What are the screening procedures used for CAPD?

II. Write notes on: $(8 \times 5 = 40)$

- 1. Describe the structures of the ear that develop from the 1st and 2nd branchial arches.
- 2. How would you use information regarding development of the auditory system in counselling parents?
- 3. Justify the need of early identification of sensori neural hearing loss in children.
- 4. Detail the high risk registers used for hearing screening program.
- 5. Explain the application of Immittance Audiometry in hearing screening programs.
- 6. Explain the screening procedure for middle ear effusion during school screening programs.
- 7. Write notes on: a) CORA b) TROCA.
- 8. Explain functional hearing loss in children with its signs and symptoms.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Prenatal hearing behaviour.
- 2. Usher's syndrome.
- 3. Aural palpabrel reflex.
- 4. Behavioural Observation Audiometry.
- 5. Write about frequency spectrum of noise makers used for behavioural screening tests.
- 6. Mention few assessment procedures for functional hearing loss in children.
- 7. Mention any two group screening test.
- 8. Write in short about the procedure of play audiometry.
- 9. Mention few speech tests developed in India.
- 10. Glendonald Auditory Screening Procedure (GASP).

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Prenatal hearing with supportive studies.

- 2. Any 2 speech tests for children.
- 3. Embryology of external ear with appropriate diagrams.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Define individual screening. Explain its merits and demerits.
- 2. One reinforcement audiometry.
- 3. Auditory behavior from 0-1 year.
- 4. Signs and symptoms of central auditory processing disorders.
- 5. JCIH.
- 6. Behavioral observation audiometry.
- 7. Explain one test to assess hearing in a 2 year old child with bilateral atresia.
- 8. Conditioned play audiometry.

- 1. Instrument and tests used for school screening.
- 2. SRT in children.
- 3. Crib-o-gram.
- 4. Localisation.
- 5. Prenatal causes for hearing loss.
- 6. Handheld Tympanometers.
- 7. Auditory myelination.
- 8. Mass media screening.
- 9. HRR for Indian population.
- 10. Neonates vs Infants.

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Development of auditory behavior from 0-2 years.
- 2. Two tests to identify functional hearing loss in children.
- 3. Explain one objective test to estimate hearing threshold in a 2 year old child.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Embryology of middle ear.
- 2. High risk registers.
- 3. Differentiate between individual vs group screening.
- 4. TROCA.
- 5. Factors affecting speech audiometry in children.
- 6. Application of OAE in paediatric population.
- 7. Use of objective test in identification of hearing loss among school children.
- 8. Importance of early identification of hearing loss.

- 1. Speech detection threshold in children.
- 2. Scan-c test.
- 3. First arch syndrome.
- 4. Automated auditory brainstem response.
- 5. Birth asphyxia.
- 6. Nu-chip.
- 7. Seating position of a child in BOA.
- 8. Name 3 tests to identify hearing loss in 1 year old child.
- 9. Modifications in VRA.
- 10. Factors affecting ARB in children.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Compare and contrast school screening program using Immittance and Pure tone audiometry.

- 2. Prenatal hearing with supportive studies.
- 3. Highlight the signs and symptoms of CAPD children. Explain any 2 tests to identify them.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Factors affecting speech audiometry.
- 2. Use of OAE in neonatal hearing screening.
- 3. Visual reinforcement audiometry.
- 4. Swinging story test.
- 5. Embryological development of middle ear.
- 6. Importance of Universal new born hearing screening.
- 7. Auditory behavioral responses in 0-1 year infants.
- 8. Parameter settings for evaluating Pediatric population in BERA.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Embryo vs fetus.
- 2. Causes for functional hearing loss in children.
- 3. JCIH.
- 4. Stimuli used for BOA.
- 5. Name 3 modifications used in speech tests for children.
- 6. MAST.
- 7. Hand held tympanometers.
- 8. Name 3 factors affecting BERA results in Pediatric population.
- 9. Speech detection threshold.
- 10. Natal causes for hearing loss.

B.Sc. AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Non-formal auditory screening tests for children.

- 2. Evaluate a 1 year 6 months old child with objective tests for hearing.
- 3. Embryological development of Inner ear with neat diagram.

II. Write notes on: $(8 \times 5 = 40)$

- 1. B.C. Speech audiometry.
- 2. Use of impedance in school screening.
- 3. Protocol for universal newborn hearing screening.
- 4. Development of ossicles.
- 5. One test to identify CAPD.
- 6. Asses an 8 year old child with functional hearing loss.
- 7. VRA.
- 8. ABR findings in pediatric population.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2316

- 1. Pre auricular tags.
- 2. Clicks vs tone bursts.
- 3. Preparation of a child for ABR.
- 4. Types of probe tones in Immittance and its applications in children.
- 5. Birth asphyxia.
- 6. HRR for Indian population.
- 7. Crib-o-gram.
- 8. WIPI.
- 9. First arch syndrome.
- 10. Localisation.

PAPER VI – PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Need for studying embryology. Write about the embryology of the inner ear with neat diagrams.

- 2. Signs and symptoms of functional hearing loss in children. Write about any 2 tests to assess functional hearing loss.
- 3. Factors affecting speech audiometry.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Importance of follow up procedures.
- 2. Behaviors observed in children during assessment.
- 3. Need for Early Hearing Detection and Intervention with evidences.
- 4. Temporal processes in CAPD.
- 5. OAE findings in young children.
- 6. Speech audiometry tests developed in India.
- 7. High Risk Register (HRR).
- 8. Crosscheck principle.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. BC speech audiometry.
- 2. ESPT.
- 3. UNHS methods.
- 4. Mass media screening.
- 5. What should be the frequency of the probe tone used in infants? Why?
- 6. Incidence and prevalence.
- 7. Triad features of Mondini's dysplasia.
- 8. Minimum Response Levels (MRL).
- 9. Ling 6 sound test.
- 10. APGAR scores.

ACE PATHOLOGY

Sub. Code: 2316

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER VI – PAEDIATRIC AUDIOLOGY

O.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Prenatal hearing with supporting evidences.

- 2. Signs and symptoms of CAPD in children. Write about any 2 tests to assess CAPD in children.
- 3. School screening and its importance in Paediatric Audiology.

II. Write notes on: $(8 \times 5 = 40)$

- 1. BOA and VRA techniques.
- 2. Basic embryology of human fetus.
- 3. Malformations of the external ear with neat diagrams.
- 4. Fetal alcohol syndrome and its relation to hearing loss.
- 5. APGAR scores and its importance.
- 6. ABR findings in children.
- 7. Development of localization in infants.
- 8. Need for test battery approach.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Sensitivity Vs specificity.
- 2. Neural plasticity.
- 3. Triad features of Waardenburg syndrome.
- 4. Automated ABR.
- 5. Name any 3 HRR.
- 6. Aplasia, dysplasia and hypoplasia.
- 7. Syndrome.
- 8. Pedigree chart.
- 9. Autosomal recessive trait.
- 10. Symptoms of functional hearing loss.

PAPER VI – PAEDIATRIC AUDIOLOGY

O.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. High Risk Register and Universal Newborn Hearing Screening.

- 2. Various conditioning tests available to assess hearing sensitivity in children.
- 3. Write about any 5 cochlear malformations with diagrams.

II. Write notes on: $(8 \times 5 = 40)$

- 1. ABR protocol for infants.
- 2. Critical period hypothesis and neural plasticity.
- 3. Waardenburg syndrome and its features.
- 4. Immittance audiometry in children.
- 5. Crib o gram vs Auditory Response Cradle.
- 6. Embryological development of the external ear.
- 7. Hearing development till 2 years of age.
- 8. Importance of speech audiometry.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Difference between spondees and trochees.
- 2. Why warble tone is used in assessing infants?
- 3. School screening procedures.
- 4. ALGO system.
- 5. Decision matrix.
- 6. Auditory Behavior Index.
- 7. Causes of congenital SNHL.
- 8. Autosomal dominant trait.
- 9. Difference between DP and TEOAE in children.
- 10. S- TORCH.

PAPER VI - PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. The importance of early identification and intervention of hearing loss.

- 2. The development of auditory behaviours from 0-2 years.
- 3. a) New born screening for hearing loss.
 - b) The various signs and symptoms observed in functional hearing loss in children.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Two tests used to identify Central Auditory Processing Disorders.
- 2. Application of OAE in paediatric population.
- 3. Embryology of external ear with neat diagrams.
- 4. VRA and its modification.
- 5. Factors affecting ABR in children.
- 6. School screening instrumentation.
- 7. Speech recognition test developed in India.
- 8. Individual hearing screening vs group hearing screening test.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2316

- 1. Play audiometry.
- 2. Causes of hearing loss in children.
- 3. Swinging story test.
- 4. Glendonald Auditory Screening Procedure (GASP).
- 5. Early Speech Perception Test (EST).
- 6. Hearing loss in Waardenburg Syndrome and Ushers syndrome.
- 7. Pre- Natal hearing behaviours.
- 8. Aural Palpabrel Reflex.
- 9. HRR in Indian population.
- 10. Sensitivity and specificity.

PAPER VI - PAEDIATRIC AUDIOLOGY

Q.P. Code: 802316

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. The role of ABR and OAE in screening and diagnosis of hearing loss.

- 2. The protocol utilised for 4 months old infant with a high risk for hearing loss.
- 3. The evaluation procedure used for 2 year old child.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Mass media hearing screening test.
- 2. High Risk Register for Indian population.
- 3. Compare and contrast BOA and VRA techniques.
- 4. Development of auditory behaviour from 0-6 months
- 5. APGAR score and it's implication.
- 6. Immittance audiometry in children.
- 7. Speech recognition threshold in children.
- 8. Factors determining the use of BC Speech Audiometry.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Speech test developed in Indian context.
- 2. First arch syndrome.
- 3. Neural plasticity.
- 4. Five important causes of hearing loss in children.
- 5. CORA vs TROCA.
- 6. Test used in identifying functional hearing loss in children.
- 7. Individual hearing screening test.
- 8. Symptoms of CAPD.
- 9. Pedigree chart.
- 10. Universal hearing screening.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours	Maximum: 100 marks		
Answer ALL questions in the same order.			
I. Elaborate on:	O	Time (Max.)	
1. Describe the different types of Diagnosis.	7	20 min.	. 10
2. Goals, steps, procedures and activities in planning speech language therapy.	7	20 min.	. 10
3. What is documentation and highlight its importance in clinical practice.	7	20 min.	. 10
II. Write notes on:			
1. Evaluation of therapy outcome.	4	10 min.	. 5
2. Informal approach to speech language therapy.	4	10 min.	. 5
3. Terminologies in speech therapeutics.	4	10 min.	. 5
4. Inclusive Education.	4	10 min.	. 5
5. Questionnaire.	4	10 min.	. 5
6. Types of rewards and punishment.	4	10 min.	. 5
7. Diagnostic report.	4	10 min.	. 5
8. Documentation of referral report.	4	10 min.	. 5
III. Short Answers on:			
1. Differential diagnosis.	2	4 min.	. 3
2. Definition of client history.	2	4 min.	. 3
3. Instrumental diagnosis.	2	4 min.	. 3
4. SLPM.	2	4 min.	. 3
5. MDVP.	2	4 min.	. 3
6. Stuttering.	2	4 min.	. 3
7. Self-reports.	2	4 min.	. 3
8. Mental Retardation.	2	4 min.	. 3
9. Lesson Plan.	2	4 min.	. 3
10. Normal non-fluency.	2	4 min.	. 3

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Describe any one diagnostic model with its merits and demerits.
- 2. Justify with examples the need for incorporating reinforcement principles and methods in speech and language treatment.
- 3. Describe any five speech and language stimulation techniques with appropriate examples.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Expand and Explain MIDVAS.
- 2. Describe the essential requirements of a speech language therapy unit.
- 3. Write notes on ethics in diagnosis and speech language therapy.
- 4. Write in brief about conferencing and counselling.
- 5. Describe your procedures of evaluation and assessment of a 16 year old boy with the complaint of voice problem.
- 6. Discuss the methods used to evaluate the therapy outcomes in individuals with speech language disorders.
- 7. Describe your plan of action when a 3 year old child is brought to you with a complaint of delay in speech and language.
- 8. What are the differences between short term goals and long term goals?

- 1. What are clinical records?
- 2. Highlight the importance of case history as a diagnostic tool.
- 3. Write about behaviour /education model of diagnosis.
- 4. What are the characteristics of a good clinician?
- 5. Write notes on "Diagnostic reports".
- 6. Describe briefly the use of "Therapy reports".
- 7. What factors would you consider in counselling parents of a hearing impaired child while recommending steps to transfer skills learnt in the therapy session to home situation?
- 8. What are the merits and demerits of group management?
- 9. Mention the variables related to effective management.
- 10. Define the term "Positive Reinforcement" with suitable examples.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Discuss the different types of diagnosis.
- 2. Explain the relevance of SLPM model in diagnosing speech and language disorders. Highlight its merits and demerits.
- 3. Write the speech language therapy procedure for a 3 year old child with congenital hearing impairment.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss the basic premises and models on which the diagnostic procedures are based.
- 2. Expand and Explain MIDVAS.
- 3. Differentiate between eclectic approach and formal approaches in speech language therapy.
- 4. What is the importance of case history taking in diagnostics?
- 5. Differentiate between individual and group therapy.
- 6. Describe the types of reinforcement schedules for children.
- 7. Write notes on importance of lesson plan in speech language therapy.
- 8. Write notes on integrated education and reverse integration.

- 1. What do you understand by the term "Diagnostics"?
- 2. Write a note on system model of diagnosis.
- 3. Write a note on diagnostic setup.
- 4. Discuss the usefulness of instrumentation in diagnostic process.
- 5. Explain briefly on "clinical observation"
- 6. What is documentation? Discuss the need for documentation of diagnostics and referral reports.
- 7. Describe briefly the use of "Therapy reports".
- 8. Delineate the general principles of speech and language therapy.
- 9. Define "Negative Reinforcement" with suitable examples.
- 10. What are clinical records?

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. How do you use reinforcement strategies in speech, language therapy?

- 2. Any two diagnostic models.
- 3. Types of diagnosis.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Importance of case history as a diagnostic tool.
- 2. Formal vs Informal approach to speech, language therapy.
- 3. Critically evaluate diagnosis by observation.
- 4. Individual and group therapy.
- 5. Self assessment of a clinician.
- 6. Goals, procedures involved in planning speech, language therapy.
- 7. Describe the essential requirements of a speech therapy unit.
- 8. Documentation of referral report.

- 1. Provocative diagnosis.
- 2. Diagnostic reports.
- 3. Parent counseling.
- 4. Difference between stuttering and normal non fluency.
- 5. Mental retardation.
- 6. Clinical records.
- 7. Name any 3 speech/language tests with use.
- 8. Parent participation.
- 9. Team members in diagnosing autism.
- 10. Use of expansion in speech, language therapy

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Speech language stimulation techniques.

- 2. Compare and contrast Clinical, direct, differential diagnosis.
- 3. Team approach to diagnosis.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Types of rewards and punishment.
- 2. Ethics in diagnosis and speech language therapy.
- 3. Importance of clinical documentation.
- 4. Evaluation of therapy outcome.
- 5. Principles of diagnosis.
- 6. Integrated vs inclusive education.
- 7. Expand and explain MIDVAS.
- 8. Methods of case history.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Provisional diagnosis.
- 2. Stuttering.
- 3. Lesson plan.
- 4. Therapy reports.
- 5. Self reports.
- 6. Formal vs Informal therapy.
- 7. SLPM.
- 8. Interview
- 9. Counseling.
- 10. Individual therapy.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Describe the relevance of case history in speech and language evaluation. Compare adults vs children's history.
- 2. Explain different therapy techniques that can be used for children with language disorder.
- 3. Justify the need for documentation of reports.

II. Write notes on: $(8 \times 5 = 40)$

- 1. General principles of diagnosis.
- 2. Interview.
- 3. Describe any one diagnostic model with its merits and demerits.
- 4. Informal approach to speech language therapy.
- 5. Differentiate between integrated and inclusive education.
- 6. Types of rewards and punishment.
- 7. Evaluation of therapy outcome.
- 8. Differential diagnosis.

III. Short Answers on:

 $(10 \times 3 = 30)$

- 1. Observation.
- 2. Imitation.
- 3. Instrumental diagnosis.
- 4. Group therapy.
- 5. Report writing.
- 6. Define "Positive Reinforcement" with suitable examples.
- 7. Autism.
- 8. Time-out.
- 9. Lesson plan.
- 10. Diagnosis by observation.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. How can reinforcement be used for speech and language therapy? State its principles and strategies.
- 2. Describe different types of diagnosis.
- 3. What is documentation? Highlight its importance in clinical practice.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Describe your plan of action when a 3 year old child is brought to you with a complain of delay in speech and language.
- 2. Differentiate between integrated and inclusive education.
- 3. Self-reports.
- 4. Provisional diagnosis.
- 5. Self-assessment and characteristics of a clinician.
- 6. Describe few speech and language stimulation techniques with appropriate examples.
- 7. Write notes on ethics in diagnosis and speech language therapy.
- 8. Describe the methods used to evaluate the therapy outcomes in individuals with speech language disorders.

- 1. Highlights the importance of case history as a diagnostic tool.
- 2. Referral reports.
- 3. Initial treatment plan.
- 4. Modeling.
- 5. SLPM.
- 6. Instrumental diagnosis.
- 7. Terminologies in the diagnostic process.
- 8. Clinical diagnosis.
- 9. Causes of delay in speech and language.
- 10. Stuttering.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Elaborate on the essential factors to be included while taking case history.

- 2. Justify with examples the need for incorporating reinforcement principles and methods in speech language treatment.
- 3. "Clinical documentation and maintaining the professional ethics is the key of a good clinician". Discuss.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. List the do's and dont's while taking case history.
- 2. Write notes on Diagnostic setup and tools.
- 3. Compare adult client history Vs children Client history.
- 4. List the general principles of speech Language therapy.
- 5. What are the different types of speech language therapy?
- 6. Highlight the need of any five clinical tools.
- 7. How do you evaluate the therapy outcome?
- 8. Write notes on Client centered counseling.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. White notes on "Self reports".
- 2. Define the term "Clinical Diagnosis".
- 3. Write the role of reinforcement in speech language therapy.
- 4. Write a note on Pre therapy assessment.
- 5. Define with example: "Reinforcement".
- 6. Highlight the importance of case history as a diagnostic tool.
- 7. How instrumentation is useful in diagnostic procedure?
- 8. Write about "Reverse Integration".
- 9. Write a note on the speech language therapy setup for children with Cerebral Palsy.
- 10. Highlight the features of Clinical Observation.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Write the different types of diagnosis in speech pathology with examples.

- 2. Discuss the similarities and differences between individual and group therapy.
- 3. Define counseling. What are the points you would counsel a parent of a child who exhibits hearing impairment with speech difficulties?

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Explain Bloom and Lahey Model with neat diagram.
- 2. "Team approach is essential for diagnosis". Justify this statement.
- 3. "The knowledge of normal aspects of speech and language acquisition helps in assessment of disorder". Elaborate on this statement.
- 4. Explain the different approaches to speech language therapy for a child with delayed speech and language due to environmental deprivation.
- 5. Write a brief about the components of speech language processing model.
- 6. Write notes on "Transfer and maintenances skills".
- 7. Mention the importance of lesson plan in speech language therapy.
- 8. Differentiate between short term and long term goals.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Write notes on "Clinical Observation".
- 2. Define the terms: "Diagnosis by observation" and "Diagnosis by treatment".
- 3. Define with example "Negative Reinforcement".
- 4. List the different types of diagnoses.
- 5. What is documentation?
- 6. Write notes on "Referral report".
- 7. What is the importance of case history taking in diagnostics?
- 8. Mention the strengths and weaknesses of the questionnaire method in case history.
- 9. Write notes on inclusive education.
- 10. How will you plan your speech language therapy for a child with Mental Retardation?

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Types of diagnosis.
- 2. Speech language stimulation techniques.
- 3. Role of reinforcement strategies in Speech Language therapy.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Self assessment of a clinician.
- 2. Importance of lesson plan in Speech Language therapy.
- 3. Evaluate-Diagnosis by Observation.
- 4. Write about behavior model of diagnosis.
- 5. Interview techniques.
- 6. Referral reports.
- 7. Highlight the terminologies in the diagnostic process.
- 8. Instrumental diagnosis.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Negative reinforcement.
- 2. Provisional diagnosis.
- 3. Counseling.
- 4. Importance of parent participation in therapy.
- 5. Team members in diagnosing Cleft palate.
- 6. Write a note on diagnostic setup.
- 7. Differential diagnosis.
- 8. General principles of Speech Language therapy.
- 9. Reverse Integration.
- 10. Modeling.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Compare and Contrast – Clinical, direct, differential diagnosis.

- 2. Describe any one diagnostic model with its merits and demerits.
- 3. Justify the need for documentation of reports.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Individual and group therapy.
- 2. Importance of case history taking in diagnostics.
- 3. What are the types of reinforcement schedules for children?
- 4. Inclusive education.
- 5. Principles of diagnosis.
- 6. Evaluation of therapy outcome.
- 7. Positive Vs Negative reinforcement.
- 8. Short team Vs long term goals.

III. Short Answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2311

- 1. Features of Clinical Observation.
- 2. Questionnaire.
- 3. Characteristics of a good clinician.
- 4. Principles of Interview.
- 5. Self reports.
- 6. Baseline assessment Vs Pre therapy assessment.
- 7. Types of punishments.
- 8. Integrated education.
- 9. Ethics in diagnosis.
- 10. Report writing.

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Goals, steps, procedures and activities in planning Speech Language therapy.

- 2. Characteristics of a good clinician as diagnostician.
- 3. Methods of taking Case history.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Types of rewards.
- 2. Essential requirements of a Speech rehabilitation unit.
- 3. Time out.
- 4. Formal Vs Informal approach in Speech Language therapy.
- 5. Bloom-Lahey diagnostic model.
- 6. What are clinical records?
- 7. Compare Adult Vs Children history.
- 8. Write notes on client centered counseling.

- 1. Ethics in Speech Language therapy.
- 2. Write a note on Speech Language therapy setup for children with cerebral palsy.
- 3. Causes of delay in Speech and Language development.
- 4. Parent Counseling.
- 5. Lesson plan.
- 6. Direct diagnosis.
- 7. Individual therapy.
- 8. Team members in diagnosing mental retardation.
- 9. Name any three Speech Language tests with use.
- 10. Need for clinical tools.

BACHELOR IN AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

Sub. Code: 2311

SECOND YEAR

PAPER I – SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

Q.P. Code: 802311

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Reinforcement principles.

- 2. Goals, steps, procedures and activities in planning therapy.
- 3. Describe any five speech stimulation techniques.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Explain MIDVAS.
- 2. Long term goals.
- 3. Ethics in diagnostics and speech language therapy.
- 4. Importance of case history.
- 5. Self Assessment.
- 6. Essential requirement of speech therapy unit.
- 7. Wepman's diagnostic model.
- 8. Types of rewards and punishment.

III. Short Answers on:

 $(10 \times 3 = 30)$

- 1. Pre therapy reports.
- 2. Reverse Integration.
- 3. Differential diagnosis.
- 4. Negative reinforcement.
- 5. Clinical observation.
- 6. Mental retardation.
- 7. Name any three speech and language test.
- 8. Team members in diagnosing autism.
- 9. Diagnostic set up.
- 10. Provocative diagnosis.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time : Three Hours	Maximu	m:100	marks
Answer ALL questions in the same order. I. Elaborate on:	Pages	Time (Max.)	
1. What are the methods to teach language to the hearing impaired children?	7	20 min	
2. How will you measure real ear gain?	7	20 min	. 10
3. Write about programmable and digital hearing aids.	7	20 min	. 10
II. Write Notes on:			
1. What is Articulation index?	4	10 min	. 5
2. Write about Multisensory approach.	4	10 min	. 5
3. What is Prescriptive procedure?	4	10 min	. 5
4. Write about classroom acoustics.	4	10 min	. 5
5. What are the amplification options for a patient with conductive hearing loss?	4	10 min	. 5
6. What are manual communications?	4	10 min	. 5
7. Why early identification is important in aural rehabilitation?	4	10 min	. 5
8. What are compression characteristics?	4	10 min	. 5
III. Short Answers on:			
1. What are the goals of rehabilitation?	2	4 min.	3
2. Monoaural Versus Binaural hearing aids.	2	4 min.	3
3. Diffraction effects.	2	4 min.	3
4. Types of ear mould.	2	4 min.	3
5. Feedback oscillation.	2	4 min.	3
6. Programmable increase in low levels.	2	4 min.	3
7. John Tracy Clinic.	2	4 min.	3
8. Standing Wave.	2	4 min.	3
9. Types of coupler.	2	4 min.	3
10. Saturation sound pressure level.	2	4 min.	3

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Educational options and setting up of class rooms for children with hearing impairment.
- 2. Electroacoustic characteristics and selection of hearing aid for children with hearing impairment.
- 3. Different methods of teaching language to the hearing impaired.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Peak clipping.
- 2. Signal processing in hearing aids.
- 3. Compression.
- 4. Types of receivers.
- 5. Parent infant-training programme (PIP).
- 6. Structures method.
- 7. Computer aided method.
- 8. Digital hearing aids.

- 1. Define rehabilitation.
- 2. Unisonsory approach.
- 3. Total communication.
- 4. Bill.
- 5. Modular hearing aids.
- 6. Binaural hearing aids.
- 7. Articulatun index.
- 8. Speech spectrum.
- 9. Word recognition scores.
- 10. Mother's Training Programme.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Define hearing aid? Write a note on classification of hearing aids?
- 2. Explain the different stages involved in making ear mould?
- 3. Describe about the selection of hearing aids for adults and geriatrics.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Shot note on Electroacoustic Characteristics.
- 2. Advantages and disadvantages of BAHA.
- 3. Write a note on educational placement for hearing impaired children.
- 4. Explain structured method.
- 5. Note on digital hearing aids.
- 6. Define multisensory approach.
- 7. Note on Functional Vs insertion gain.
- 8. Discuss about the Problems faced by people with hearing impairment.

III. Short Answers on:

 $(10 \times 3 = 30)$

- 1. Master hearing aids.
- 2. Output limiting.
- 3. POGO rule.
- 4. Articulation Index.
- 5. WDRC.
- 6. SNR.
- 7. Damping.
- 8. FROS.
- 9. Desired sensation level (DSL).
- 10. Dynamic range.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Objective methods in hearing aid selection with instrumentation.
- 2. a) Signal processing in hearing aids.
 - b) Fitzgeral Key.
- 3. Educational placement of hearing impaired children.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Bone anchored hearing aids.
- 2. Desired Sensation level.
- 3. Electroacoustic characteristics of hearing aid with ear mould.
- 4. Importance of measuring EAC of hearing aids.
- 5. Groth's approach.
- 6. FIG 6.
- 7. Distinguish between auditory vs Visual vs tactile modality.
- 8. Importance of early identification of hearing impairment.

- 1. Extended low frequency amplification.
- 2. PILL.
- 3. IROS.
- 4. Scale Adapt.
- 5. Barny five state method.
- 6. Total communication.
- 7. Modular hearing aids.
- 8. Compression ratio.
- 9. WRDC.
- 10. Importance of binaural amplification.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Factors affecting outcome in the rehabilitation of hearing impaired.

- 2. Instrumentation for measuring electro acoustic characteristics in different types of hearing aids.
- 3. Prescriptive procedures in hearing aid selection.

II. Write notes on: $(8 \times 5 = 40)$

- 1. NAL.
- 2. Directional hearing aids.
- 3. Functional Gain.
- 4. Head shadow effect.
- 5. Computer aided teaching method for HI.
- 6. Articulation Index.
- 7. IHAFF.
- 8. Parent Infant Training program.

- 1. Wing Symbols.
- 2. Compression Threshold.
- 3. FROS.
- 4. Frequency transposition.
- 5. Apple Tree Program.
- 6. Preferential seating of hearing impaired.
- 7. Maternal Reflexive method.
- 8. Cues perceived through tactile modality.
- 9. POGO.
- 10. Reverberation in classroom affecting performance of the hearing impairment children.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain prescriptive and comparative procedures for Non-Linear hearing aid selection.

- 2. Explain different types of compression available in Digital hearing aids.
- 3. Explain various factors for setting up a classroom for hearing impaired children.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Classification of hearing aids according to ISI standards.
- 2. Extended low frequency amplification.
- 3. Different types of educational placement for hearing impaired children.
- 4. Apple tree method of language teaching.
- 5. Tadoma.
- 6. Goals for aural rehabilitation.
- 7. OSPL90 and gain of hearing aid.
- 8. Insertion gain measurements.

- 1. Indian sign language.
- 2. Cued speech.
- 3. Maternal reflective method.
- 4. Digital signal processing.
- 5. Hearing aids for infants.
- 6. John Tracy clinic program.
- 7. Master hearing aid.
- 8. Functional gain.
- 9. Binaural hearing aids.
- 10. Soft ear mould.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Explain various criteria for recommending the educational placement of a hearing impaired child using suitable examples.
- 2. Explain various pre selection factors that need to be considered before fitting a hearing aid.
- 3. Name different electroacuastic characteristics that can be measured from Behind the Ear hearing aid and explain them.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Compare and contrast unisensory with multisensory approach.
- 2. Peak clipping.
- 3. Functional gain.
- 4. Directional hearing aids.
- 5. Early identification of hearing loss.
- 6. Natural method of language teaching.
- 7. Parent Infant training Program.
- 8. Total communication.

III. Short Answers on:

 $(10 \times 3 = 30)$

- 1. Treble increase at low level.
- 2. Reverberation time.
- 3. Rooting of signals.
- 4. Articulation index.
- 5. ADIP scheme.
- 6. Bone anchored hearing aid.
- 7. Anechoic chamber.
- 8. Any two goals of rehabilitation.
- 9. Preferential seating of hearing impaired child.
- 10. Modular hearing aids.

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Importance of early identification and rehabilitation for hearing impairment.

- 2. Explain the parts of bone anchored hearing aid with a neat diagram along with candidacy.
- 3. Discuss about the educational problems faced by children with hearing impairment.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Explain frequency transposition and the need to do it.
- 2. Neat labeled diagram of test box.
- 3. Explain Articulation index.
- 4. Purpose of measuring EAC of hearing aids.
- 5. APPLE TREE method.
- 6. Any one loudness normalization method to prescribe gain in the hearing aid.
- 7. Discuss about preferential seating in a classroom for a child with hearing impairment.
- 8. Diagram, candidacy and working of transcranial CROS.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Expand ISI, IEC, ANSI.
- 2. Peak clipping.
- 3. Explain 60dB rule for mono-aural hearing aid fitting.
- 4. TADOMA.
- 5. Speech spectrum.
- 6. Wing's Symbols.
- 7. Types of manual communication.
- 8. Partial integration.
- 9. Head shadow effect.
- 10. Types of hearing aid.

Sub. Code: 2315

B.Sc. AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Use of Prescriptive procedures in selection of hearing aids.

- 2. Compare the methods of teaching language to the hearing impaired.
- 3. Measurement of electro- acoustic characteristics in hearing aids.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Mother's training program.
- 2. CROSS hearing aids.
- 3. Articulation Index.
- 4. Correspondence programs for the hearing impaired.
- 5. Multisensory approach.
- 6. IHAFF.
- 7. Various Government schemes for procuring hearing aids.
- 8. Importance of early identification.

III. Short answers on: $(10 \times 3 = 30)$

- 1. TADOMA method.
- 2. SKI HI.
- 3. Patterning.
- 4. TILL.
- 5. Comment about preferential seating in an educational set-up for children with hearing impairment.
- 6. Sensitivity period.
- 7. SEE I.
- 8. Critical age concept.
- 9. NAL.
- 10. Equivalent input noise.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

Sub. Code: 2315

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Highlight the Educational Program for the parents of the hearing impaired.

- 2. Factors in the selection and fitting of hearing aids.
- 3. Analysis of electro acoustic characteristics of hearing aids.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Fitzgerald key.
- 2. Unisensory versus Multisensory approach.
- 3. Peak clipping.
- 4. Criteria for recommending various educational placement of hearing impaired.
- 5. Master hearing aids.
- 6. Natural method.
- 7. Bone anchored hearing aid.
- 8. Factors affecting oral form of communication.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Hearing aids for conductive hearing loss.
- 2. Frequency transposition.
- 3. Wing symbols.
- 4. Head shadow effect.
- 5. SEE II.
- 6. Binaural amplification.
- 7. BILL.
- 8. POGO.
- 9. Rochester method.
- 10. OSPL 90.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Compare and contrast Analog, programmable and digital hearing aids.

- 2. Factors to be considered in setting up of classroom for the hearing impaired.
- 3. Comparative procedures in hearing aid selection.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Acoupedic approach.
- 2. Selection of hearing aids for adults with recruitment.
- 3. Changes in electro acoustic characteristics of hearing aid due to ear mould.
- 4. Types of manual communication.
- 5. Parent Infant training program.
- 6. Computer aided teaching methods for hearing impaired.
- 7. Directional hearing aids.
- 8. Uni-sensory approach.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. BI IROS.
- 2. APPLE TREE.
- 3. Speech spectrum.
- 4. Advantages of natural method over structural method.
- 5. Disadvantages of Fitzgerald key.
- 6. Total communication.
- 7. Cued speech.
- 8. PILL.
- 9. DSL
- 10. Total Harmonic Distortion.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

Sub. Code: 2315

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH **HEARING IMPAIRMENTS - II**

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Educational Placement of hearing impaired children.

- 2. Methods of teaching language to hearing impaired.
- 3. Classification of Hearing Aids and its advantages.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Types of CROS Hearing Aid.
- 2. Multisensory approach.
- 3. Parent Infant Training Program.
- 4. Amplification options for Conductive hearing loss.
- 5. Manual Communication.
- 6. IHAFF.
- 7. Insertion gain measurements.
- 8. Government schemes for procuring hearing aids.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Standing Wave.
- 2. Monaural vs Binaural hearing aids.
- 3. Word recognition scores.
- 4. Head shadow effect.
- 5. Master hearing aids.
- 6. Damping.
- 7. Fitzgerald key.
- 8. Types of ear moulds.
- 9. BILL.
- 10. Modular Hearing Aids.

Sub. Code: 2315

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Elaborate on Analog vs Digital hearing aid with its advantages and disadvantages.

- 2. Importance of early identification and rehabilitation of Hearing impaired.
- 3. Factors to be considered in selection and fitting of hearing aid in pediatric as well as adult population.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Articulation index.
- 2. Desired sensation level.
- 3. Types of receivers.
- 4. Extended low frequency amplification.
- 5. Peak chipping.
- 6. Functional Gain.
- 7. Compression characteristics.
- 8. Speech banana.

III. Short answers on: $(10 \times 3 = 30)$

- 1. Factors in fitting hearing aid to geriatrics.
- 2. Indian Sign Language.
- 3. Anechoic chamber.
- 4. POGO rule.
- 5. Venting.
- 6. Types of couplers.
- 7. Maternal Reflexive method.
- 8. TILL.
- 9. TADOMA.
- 10. Hearing aids for sightless.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Factors to be considered in setting up classroom for hearing impaired.

- 2. Prescriptive vs Comparative procedure in hearing aid selection.
- 3. Highlight the Educational Program for the parents of the hearing impaired.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Apple tree method.
- 2. Importance of early identification.
- 3. Computer aided method.
- 4. Extended low frequency amplification.
- 5. Total communication.
- 6. Unisensory versus Multisensory approach.
- 7. Functional vs insertion gain.
- 8. Goals for aural rehabilitation.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Wing symbols.
- 2. Cued speech.
- 3. Importance of reverberation with reference to hearing impaired.
- 4. Disadvantages of Fitzgerald key.
- 5. Name the instruments used for electro acoustic measurements of hearing aids.
- 6. Body baffle effect.
- 7. Total Harmonic Distortion.
- 8. Hearing aids for infants.
- 9. Rochester method.
- 10. Factors in fitting hearing aid to geriatrics.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER V – TECHNOLOGY AND MANAGEMENT FOR PERSONS WITH HEARING IMPAIRMENTS - II

Q.P. Code: 802315

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Electro acoustic characteristics in hearing aids.

- 2. Educational problems of children with hearing impairment in India.
- 3. Explain about different signal processing in hearing aids.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Various schemes for procuring hearing aids under Government of India/State.
- 2. Advantages of binaural amplification.
- 3. Auditory approach vs tactile approach.
- 4. Total harmonic distortion and inter modulation distortion.
- 5. Routing of signals.
- 6. Master hearing aids.
- 7. Box technique.
- 8. Different styles of hearing aid.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2315

- 1. RECD.
- 2. IHAFF.
- 3. Bi CROS.
- 4. Rochester method.
- 5. BAHA.
- 6. Compression threshold.
- 7. Analog hearing aids.
- 8. Hearing aids for conductive hearing loss.
- 9. Speech spectrum/Speech banana.
- 10. NAL.

PAPER III – VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours	Maximu	Maximum: 100 marks		
Answer ALL questions in the same or		T .	N /1	
I. Elaborate on:	0	Time (Max.)		
	(Max.)	(Max.)		
1. Development of voice from birth to senescence.	7	20 min	. 10	
2. Who are professional voice users? How do you educate them on vocal hygiene?	7	20 min	. 10	
3. What is the role of Speech Pathologist in a laryngectomy rehabilitation team?	7	20 min	. 10	
II. Write Notes on:				
1. Myoelastic aerodynamic theory.	4	10 min.	. 5	
2. Puberphonia.	4	10 min.	. 5	
3. MDVP.	4	10 min.	. 5	
4. Infant cry analysis.	4	10 min.	. 5	
5. Voice problems in hearing impaired.	4	10 min.	. 5	
6. Classification of voice disorders.	4	10 min.	. 5	
7. Vocal nodule.	4	10 min.	. 5	
8. Air insufflation test.	4	10 min.	. 5	
III. Short Answers on:				
1. Jitter.	2	4 min.	3	
2. Vital capacity.	2	4 min.	3	
3. Cricothyroid muscle.	2	4 min.	3	
4. Functions of epiglottis.	2	4 min.	3	
5. Nasalence.	2	4 min.	3	
6. Difference between abductor and adductor paralysis.	2	4 min.	3	
7. Laryngomalacia.	2	4 min.	3	
8. Dysphagia.	2	4 min.	3	
9. Difference between IDL and VDL.	2	4 min.	3	
10. Cri du chat Syndrome.	2	4 min.	3	

PAPER III - VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Describe the principle, procedure, advantages and disadvantages of stroboscopic evaluation. Compare any two hyperfunctional and hypofunctional voice disorders based on its parameters.
- 2. Discuss the role of Speech-Language pathologist in pre-operative and postoperative counseling of laryngectomee.
- 3. Discuss the steps involved in professional voice care.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss the aetiology, symptoms, laryngoscopic findings and management for congenital laryngeal web.
- 2. Expand and explain GRBAS.
- 3. Discuss the aetiology, symptoms, laryngoscopic findings and management forvocal cord nodules.
- 4. Discuss the working procedure and interpretation of Electro Glottogram using schematic diagram.
- 5. Discuss the aetiology, symptoms, laryngoscopic findings and management for patients with U/L Recurrent Nerve Palsy.
- 6. Discuss the rationale and steps in resonant voice therapy.
- 7. What is hypothyroidism? Describe the voice characteristics in patients with Hypothyroidism.
- 8. Classification of professional voice users.

- 1. List out the voice characteristics in patients with complete cleft of lip and palate
- 2. Brief on cavity-tone theory of phonation
- 3. What is cri-du-chat syndrome? List out the voice and associated symptoms.
- 4. What is chronic laryngitis? List out its types and common vocal symptoms
- 5. Brief on Radical-neck dissection
- 6. Brief onbuccal speech
- 7. List out different types of voice therapy
- 8. What is S/Z ratio? Indicate its importance on identifying voice disorders
- 9. What are the major classifications of MDVP?
- 10. Who are professional voice users?

PAPER III – VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Differentiate between organic, functional and neurogenic voice disorders

- 2. a) Explain the developmental changes with respect to structure of larynx and voice characteristics from birth to senescence with graphical representation.
 - b) Describe the voice characteristics in individuals with profound hearing loss and justify.
- 3. Describe the vocal education for the professional voice users

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss the etiology, symptoms, laryngoscopic findings and management for patients with Superior Laryngeal nerve palsy.
- 2. Discuss the etiology, symptoms, laryngoscopic findings and management for laryngomalacia.
- 3. Discuss the advantages and disadvantages of acoustic and perceptual voice evaluation.
- 4. Inverse filtering procedures.
- 5. What is the rationale for chewing technique? Describe the steps.
- 6. What is supracricoid laryngectomy? Discuss its complications.
- 7. Medico surgical treatment is the primary objective in management of congenital voice disorders-Justify the statement.
- 8. Application of singing techniques for treatment of dysphonia.

- 1. What is phonosurgery? List out its types.
- 2. Medico surgical management and voice therapy for thermal burns of larynx.
- 3. Brief on classification of abnormal voice.
- 4. Schematic representation of vagus nerve supply to larynx.
- 5. Brief on pharyngeal speech.
- 6. Speech characteristics of oesophageal speech.
- 7. Compare EGG of normal vocal fold function and one hyper functional voice disorder with illustration.
- 8. Define fundamental frequency. What are the FO values for adult males and females?
- 9. Define hypo nasality and list any four aetiologies.
- 10. Highlight the role of speech therapist in treatment of professional voice users.

PAPER III - VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

- 1. Describe in detail the development of larynx and voice characteristics from birth up to senescence with appropriate illustrations.
- 2. What is trachea esophageal speech? Describe the anatomical aspects, candidacy types of TEP, complications associated with fitting of TEP.
- 3. Who are professional Voice users? Describe the classification of professional voice users and importance of vocal hygiene program.

II. Write notes on: $(8 \times 5 = 40)$

- 1. What is the candidacy for esophageal speech?
- 2. Describe the extrinsic muscles of larynx.
- 3. Describe any 2 therapy techniques that may be used for puberphonia.
- 4. Describe the various membranes and joints of the larynx
- 5. How does thyroid imbalance affect voice?
- 6. What are the types of Spasmodic Dysphonia and treatment options for SD?
- 7. How will you classify "abnormal voice"?
- 8. What are the voice disorders related to respiratory problems?

- 1. Define: Tidal Volume, Vital Capacity and Maximum Phonation Time and give normative values for the same.
- 2. What are the functions of larynx?
- 3. Name the bone that supports the laryngeal framework and describe its function
- 4. Which are the muscles responsible for:
 - a) Production of high pitch b) Production of low pitch c) Abduction of vocal folds.
- 5. Name 3 endoscopic procedures used to study the larynx.
- 6. What are congenital voice disorders? Explain with a few examples.
- 7. Define: Laryngectomy and Laryngectomee.
- 8. Discuss the etiology of laryngeal cancer.
- 9. Name any 2 self-reporting questionnaires for assessing voice.
- 10. What is the significance of hydration in a vocal hygiene program?

PAPER III – VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Evaluation of a thirty year old kinder garden teacher with the complaint of vocal fatigue and hoarse voice. What vocal hygiene program would you advise?

- 2. Explain any two congenital voice disorders with signs, symptoms and management.
- 3. Describe different methods of teaching oesophageal speech to a laryngectomy.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Voice problems in geriatrics.
- 2. Stoma care in laryngectomy.
- 3. Neurochromatic theory.
- 4. Air insuffalation test.
- 5. Explain one facilitatory technique step by step for a hyper functional voice disorder.
- 6. Neck vs mouth-type artificial larynx.
- 7. Inverse filtering.
- 8. Vagus nerve and its relation to voice.

III. Short Answers on: $(10 \times 3 = 30)$

- 1. Lateral cricoarytenoid.
- 2. Mean air flow rate.
- 3. Buccal speech.
- 4. Characteristics of normal voice.
- 5. Dysphagia.
- 6. Bernoulli's effect.
- 7. One surgical procedure as a treatment for voice disorder.
- 8. Unpaired cartilages of larynx.
- 9. Laryngeal stuttering.
- 10. Laryngectomy.

PAPER III – VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Critically evaluate the instrumental techniques for evaluating voice disorders.

- 2. Enumerate on the perceptual evaluation of voice.
- 3. Describe in detail the role of SLP in the management of hyperfunctional voice disorders.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Professional Voice Disorders.
- 2. Illustrate and label Resonatory system.
- 3. Illustrate and label Blood supply of larynx.
- 4. Harmonic theory.
- 5. Vocal Hygiene Program.
- 6. Conversion Voice disorder.
- 7. Joints and membranes of the larynx.
- 8. Layers of the vocal cord.

- 1. Expiratory Reserve volume.
- 2. Tidal volume.
- 3. s/z ratio.
- 4. Dysphonia Severity Index.
- 5. Total Lung Capacity.
- 6. Spastic dysphonia.
- 7. Essential voice tremor.
- 8. TNM classification.
- 9. Aerodynamic parameters of voice.
- 10. Expand MDVP.

PAPER III – VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 marks

Answer ALL questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Critically evaluate the treatment techniques for children with voice disorders.

- 2. Enumerate on the anatomical changes in the larynx.
- 3. Describe in detail the role of SLP in the management of mutational falsetto.

II. Write Notes on: $(8 \times 5 = 40)$

- 1. Illustrate with labels the cartilages of the larynx.
- 2. Cri du chat syndrome.
- 3. Voice rest.
- 4. Non speech functions of the larynx.
- 5. Types of prosthetic appliances used in laryngectomy.
- 6. Inhalation phonation technique.
- 7. TNM classification.
- 8. Voice tremor.

- 1. Name three recent approaches to treat hyper functional voice disorders.
- 2. Vocal polyp.
- 3. Thyroid gland.
- 4. Plica ventricularis.
- 5. Intelligibility in laryngectomee speech.
- 6. Tracheo-esophageal puncture.
- 7. Stoma hygiene.
- 8. Nerve supply to the larynx.
- 9. Corniculate cartilage.
- 10. Abdominal breathing.

PAPER III - VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Differentiate between organic and functional voice disorders.

- 2. Explain the developmental changes with respect to structure of larynx and voice characteristics from birth to senescence with graphical representation.
- 3. Carnatic singer with the complaint of change in the voice is referred to the speech language department. What are the various vocal assessments and management provided?

II. Write notes on: $(8 \times 5 = 40)$

- 1. What and why are warm up and cool- down exercises?
- 2. Perceptual evaluation of voice disorders.
- 3. Blood supply and Nerve supply to larynx.
- 4. Acoustic characteristics of normal voice.
- 5. Congenital voice disorders.
- 6. Laryngectomee- Pre and post operation counselling.
- 7. Electro Glottal Gram and parameters of EGG.
- 8. Voice Handicap Index and Voice Related Quality of Life.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Calculation of Dyphonia Severity Index.
- 2. Neck vs mouth type artificial larynx.
- 3. Classification of professional voice users.
- 4. Hyperfunctional and hypofunctional voice disorders.
- 5. Four methods of esophageal speech.
- 6. Perturbation- Jitter and Shimmer measures.
- 7. Air insufflation test.
- 8. Vocal Hygiene Program.
- 9. Voice problem in endocrine disorders.
- 10. Vagus nerve and its relation to voice.

PAPER III - VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 Marks

Answer All questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain the age related changes with respect to structure of larynx and voice characteristics?

- 2. What is the role of speech pathologist in a laryngectomy rehabilitation team?
- 3. Explain any two hyperfunctional voice disorders with signs, symptoms, assessment, and management.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Clinical application of EGG.
- 2. Types and pattern of breathing.
- 3. What is Endoscopy? Difference between Direct and Indirect Laryngoscopy.
- 4. Source filter model.
- 5. Instruments used in assessing the aerodynamic measures.
- 6. a) What is Laryngectomy and Laryngectomee?
 - b) Impact of laryngectomy.
- 7. What is Alaryngeal speech?
- 8. Post operative counselling for hyperfunctional voice disorders.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. What is contact quotient, open quotient, speech quotient?
- 2. What is Tokyo speech aid and blom singer voice prosthesis?
- 3. Explain Consonant Injection method.
- 4. Write briefly on CSL, PRAAT and Dr Speech.
- 5. What is jitter and shimmer measures?
- 6. Laryngeal stuttering.
- 7. What is Warm up exercises and Vocal hygiene program?
- 8. Neck Vs mouth type artificial larynx.
- 9. Classification of professional voice users.
- 10. Cri- du- chat syndrome and soft voice syndrome.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER III – VOICE AND LARYNGECTOMEE

Q.P. Code: 802313

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Discuss the role of Speech-Language pathologist in pre-operative and postoperative counselling of laryngectomee.

- 2. Describe the principle, procedure, advantages and disadvantages of stroboscopic evaluation.
- 3. Differentiate between organic, functional and neurogenic voice disorders.

II. Write notes on: $(8 \times 5 = 40)$

1. Discuss the aetiology, symptoms, Laryngoscopic findings and management for vocal polyp.

- 2. Types of prosthetic appliances used in Laryngectomy.
- 3. Write the voice characteristics in spasmodic dysphonia and Muscle tension dysphonia. How to differentiate the SD from MTD?
- 4. Write about Resonant Voice Therapy.
- 5. Congenital voice disorders.
- 6. Write about Lee Silverman Voice Treatment.
- 7. Discuss the aetiology, symptoms, Laryngoscopic findings and management for Muscle tension dysphonia.
- 8. Compare Tracheo-oesophageal and oesophageal voice.

- 1. Write about pharyngo-oesophageal segment.
- 2. Write about cul-de-sac resonance.
- 3. Plica venticularis.
- 4. Unpaired cartilages of larynx.
- 5. Presbylaryngis and presbyphonia.
- 6. Characteristics of normal voice.
- 7. Mean Air flow rate.
- 8. Name the bone that supports laryngeal frame work and describe its function.
- 9. Describe the etiology of laryngeal cancer.
- 10. Mention the parts of supraglottis of larynx.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR

PAPER III – VOICE AND LARYNGECTOMY

Q.P. Code: 802313

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Explain the developmental changes with respect to structure of larynx and voice characteristics from birth to senescence.

- 2. Who are professional voice users? Describe the classification of professional voice users and importance of vocal hygiene program.
- 3. What is trachea esophageal speech? Describe the anatomical aspects, candidacy types of TEP, complications associated with fitting of TEP.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss the aetiology, symptoms, Laryngoscopic findings and management for vocal cord nodules.
- 2. Discuss the aetiology, symptoms, Laryngoscopic findings and management for laryngomalacia.
- 3. What is hypothyroidism? Describe the voice characteristics in patients with Hypothyroidism?
- 4. Describe any two therapy techniques that may be used for mutational falsetto.
- 5. Write about the histology of Vocal cord.
- 6. Describe the types of trachea-oesophageal prosthesis.
- 7. Write about vocal function exercises.
- 8. Expand and Explain GRBAS.

III. Short answers on:

 $(10 \times 3 = 30)$

Sub. Code: 2313

- 1. Pitch perturbation.
- 2. Laryngeal stuttering.
- 3. Write about Voice Handicap Index.
- 4. Define: (i) Diplophonia (ii) Pitch breaks (iii) Voice break.
- 5. Name three recent approaches to treat hyper functional voice disorders.
- 6. Vocal hygiene program.
- 7. Nerve supply to larynx.
- 8. What is S/Z ratio? Indicate its importance on identifying voice disorders.
- 9. Define hypo nasality and list any four aetiologies.
- 10. Write different types of breathing.

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER III – VOICE AND LARYNGECTOMY

Q.P. Code: 802313

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Describe Electromyography, mechanism of recording, instrumentation, clinical application and its advantages.

- 2. Describe different methods of teaching oesophageal speech to a Laryngectomy.
- 3. Who are professional voice users? Describe the classification of professional voice users and importance of vocal hygiene program?

II. Write notes on: $(8 \times 5 = 40)$

- 1. Describe the aerodynamic measures of voice.
- 2. What are the types of spasmodic dysphonia and treatment option for SD?
- 3. Discuss the rationale and steps in Resonant Voice Therapy.
- 4. Describe the voice problems in endocrine disorder.
- 5. Write about vocal function exercise.
- 6. Write voice characteristics in Abductor and Adductor Spasmodic dysphonia and speech material used to differentiate?
- 7. Electroglottography and its parameters.
- 8. Expand and Explain the GRBAS.

III. Short answers on:

 $(10 \times 3 = 30)$

- 1. Myxoedema.
- 2. Confidential voice therapy.
- 3. Vocal Hygiene program.
- 4. Perturbation- jitter and Shimmer measures.
- 5. Write briefly on CSL, PRAAT, and Dr. Speech.
- 6. What is contact quotient, open quotient and speech quotient?
- 7. Differentiate Adductor and Abductor palsy.
- 8. Buccal speech.
- 9. Define: Laryngectomy and laryngectomee.
- 10. List any three symptomatic voice therapy techniques.

Sub. Code: 2313

 $(10 \times 3 = 30)$

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY SECOND YEAR PAPER III – VOICE AND LARYNGECTOMY

Q.P. Code: 802313

Time: Three Hours Maximum: 100 Marks

Answer all questions

I. Elaborate on: $(3 \times 10 = 30)$

1. Discuss the role of Speech-Language pathologist in pre-operative and postoperative counselling of laryngectomy.

- 2. Describe the principle, procedure, advantages and disadvantages of stroboscopic evaluation.
- 3. Explain any two hyperfunctional voice disorders with signs, symptoms, assessment, stroboscopic findings, and management.

II. Write notes on: $(8 \times 5 = 40)$

- 1. Discuss the aetiology, symptoms, Laryngoscopic findings and management for Reinke's oedema.
- 2. Describe the different types of Alaryngeal speech and its merits and demerits.
- 3. Write the voice characteristics in spasmodic dysphonia and Muscle tension dysphonia. How to differentiate the SD from MTD?
- 4. Define: Tidal volume, Vital capacity and Maximum Phonation Time.
- 5. Congenital voice disorders.
- 6. Write about Lee Silverman Voice Treatment.
- 7. Discuss the aetiology, symptoms, Laryngoscopic findings and management for Muscle tension dysphonia.
- 8. Compare Tracheo-oesophageal and oesophageal voice.

III. Short answers on:

- 1. Write about pharyng-oesophageal segment.
- 2. Write about cul-de-sac resonance.
- 3. Plica venticularis.
- 4. Unpaired cartilages of larynx.
- 5. Presbylaryngis and presbyphonia.
- 6. Write the difference between Voice abuse and Voice Misuse.
- 7. Mean Air flow rate.
- 8. Name any endoscopic procedures used to study the larynx.
- 9. Describe the etiology of laryngeal cancer.
- 10. Mention the parts of supraglottis of larynx.