



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

(A DEEMED TO BE UNIVERSITY)

Bachelor in Audiology and Speech– Language Pathology

First Year Semester-II, October 2022 Examination.

Time: 3 Hrs

Max Marks: 80

Neurology

QP Code:S2050

Your answers should be specific to the question asked

Draw neat labelled diagrams wherever necessary

I 1. a) What are the functions of CNS? Describe the anatomical and functional subdivisions of CNS. 2 + 6

b) Describe any 2 cranial nerves that mediate speech, language, and hearing functions. 8

OR

2. a) With the help of a neat diagram, discuss the circle of Willis and its clinical significance. 8

b) Which are the protective layers of the brain? What is CSF? Describe the functions and circulation of CSF within the brain. 2+1+5

II 3. a) Discuss the structure and functions of the pyramidal and extrapyramidal pathways. 8

b) Which are the primitive reflexes? How do you evaluate them in infants? Write a brief note on their clinical significance. 2+4+2

OR

4. a) Trace the auditory pathway and describe the functions of each stage of the pathway. 8

b) Describe the areas important for motor planning and execution in the brain. 8

III 5. a) Discuss the aetiology, clinical features, diagnosis, sequel, and treatment of hydrocephalus. 8

b) Describe different dysarthrias classified based on anatomical site of lesion (UMN, LMN, etc.) 8

OR

6. a) Discuss the aetiology, pathogenesis, clinical features, diagnosis and complications of bacterial and viral meningitis. 8

b) Discuss any 4 neural tube defects observed in infants. 8



IV 7. a) What causes multiple sclerosis? Discuss its pathophysiology and clinical features including speech. 2+6

b) Classify intracranial tumours. Discuss neurofibromatosis and its variants. 2+6

OR

8. a) Discuss phenylketonuria and Wernicke's encephalopathy. 8

b) Discuss the aetiology, pathogenesis, and symptoms of Wilson's disease. How do you manage speech problems associated with this disease? 6+2

V 9. a) What are the major components of central language mechanism? Discuss the role of each of these components in mediating language. 3+5

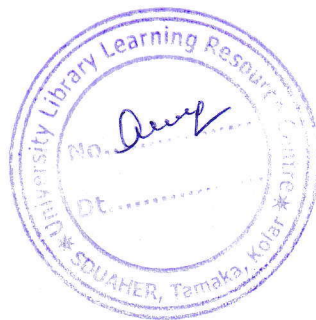
b) What is cerebral palsy? Discuss the clinical features of any three types of cerebral palsy. 2+6

OR

10. a) What is aphasia? What are the causes of aphasia? With the help of a neat diagram, discuss the Boston classification system of aphasia. 1+2+5

b) Describe the interrelated functions of cognition and communication. Describe any one cognitive disorder which is the result of a neurological cause. 4 + 4

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Time: 3 Hrs

Max Marks: 80

Speech Language Pathology

QP Code:S2070

Your answers should be specific to the question asked
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- I** 1. a) Define diagnosis. Discuss different types of diagnoses. 2 + 6
b) Describe various diagnostic tools used in clinical diagnosis. 8

OR

2. a) Describe the characteristics of a good clinician. 8
b) Write an essay on the causes of speech and language disorders. 8
- II** 3. a) Define reinforcement. Describe about positive and negative reinforcement. 2 + 6
b) Discuss the formal, informal and eclectic approaches to speech-language therapy. 8

OR

4. a) Discuss the advantages and disadvantages of individual and group therapy. 8
b) Discuss different approaches to speech-language therapy. 8
- III** 5. a) Describe the assessment procedure for articulation and phonological disorders. 8
b) Define voice disorders. Discuss the therapeutic options for voice disorders. 2 + 6

OR

6. a) What do you understand by the term prevention and early identification? Why early identification of speech and language disorders is important? 2 + 6
b) What is dysphagia? Discuss, in detail, management of swallowing disorders. 2 + 6



- IV 7. a) What are some of the language disorders seen in adults? 3 + 5
Describe assessment process for any one of language disorders seen in adults.
- b) Expand the acronym ADHD. What are the major characteristics of this disorder? How do you manage ADHD in children? 1 + 3 + 4

OR

8. a) What are the features of ASD? How would you manage behavioural deviations in children with ASD? 4 + 4
- b) Define learning disability. How do you treat the children with learning disability? 2 + 6
- V 9. a) Highlight the need for, and use of, clinical records in the diagnosis and management of speech disorders in children. 8
- b) Define professional code of conduct. Describe the code of conduct given by ISHA. 2 + 6

OR

10. a) Describe the role of Anganwadi and resource teachers in community rehabilitation 8
- b) Define community based rehabilitation. Describe its advantages and challenges. 2 + 6

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Time: 3 Hrs

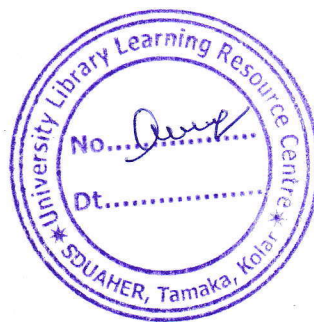
Max Marks: 80

Electronics and Acoustics

QP Code: S2090

*Your answers should be specific to the question asked
Draw neat labelled diagrams wherever necessary*

- I 1 (a) Show the essential components of a UPS. Indicate the difference between a UPS and an inverter. 8
- (b) How is thyristor used in a switched mode power supply (SMPS)? Explain. 8
- OR 8
- 2 (a) Discuss the working principle, advantages and applications of LCDs. 8
- (b) With a diagram, illustrate how a uni-junction transistor works as a switch. Mention how it generates click stimuli for ABR and OAEs. 8
- II 3 (a) Which are the two types of wave propagation? Which type is involved in propagation of sound waves? How does sound propagate in a medium? 8
- (b) Distinguish between pitch and frequency of sound. 8
- OR 8
- 4 (a) Differentiate acoustic impedance and admittance. State and explain the formula for finding out acoustic impedance and specific acoustic impedance. 8
- (b) What do you mean by reverberation? How is reverberation measured? 8
- III 5 (a) What is RAM? Explain the role of RAM in the operation of a computer. 8
- (b) Explain the structure and functioning of a loudspeaker. 8
- OR 8
- 6 (a) On the basis of Sabine's formula, explain the methods to reduce reverberation time. 8
- (b) Name five different types of logic gates. With truth table, explain how each one functions. 8



- IV 7 (a) Discuss the role of text processing unit and grapheme to phoneme conversion unit in a speech synthesis system. 8
- (b) How does a linear predictive coding (LPC) system function? Mention three applications of LPC. 8

OR

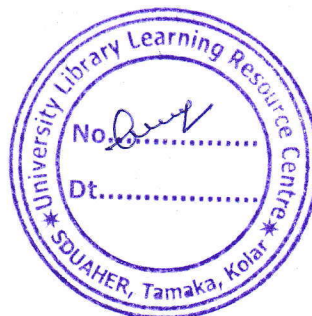
- 8 (a) Describe any one of the frequency domain methods of speech processing. 8
- (b) How do you compute the short time energy of a speech signal?

- V 9 (a) Describe the technology with which a speech spectrograph plots the information regarding frequency, time and amplitude of a speech signal? 8
- (b) With a schematic diagram, explain the basic technology of digital hearing aids. 8

OR

- 10 (a) Explain the technology with which pure tone is generated and controlled in an audiometer. 8
- (b) Describe the principle of operation of a distortion product oto-acoustic emission (DPOAE) analyzer.

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Semester-II October 2022 Examination.

TIME –2.30 Hrs.

MAX MARKS: 80

**Neurology
QP Code: S2320**

*Your answers should be specific to questions asked.
Draw neat labelled diagrams wherever necessary*

Long Essay

2 X 10 = 20 marks

1. What is a neuron? Describe its structure with a neat diagram. How are neurons classified?
2. Describe the central auditory nervous system and its pathway.

Short Essays

6 X 5 = 30 marks

3. Discuss, in brief, the major components of central language mechanism.
4. List all the cranial nerves, and describe their functions.
5. Describe the sensory anatomy of the oral mechanism along with innervation system.
6. Write a note on meningitis and encephalitis.
7. What is hydrocephalus. What are its causes and clinical presentation?.
8. What are cerebrovascular diseases? List the different types of diseases.

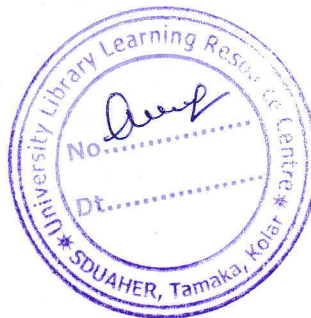
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Short Answers

10 X 3 = 30 marks

1/1

9. Differentiate between apraxia of speech and dysarthria.
10. Define spastic dysarthria. What causes it?
11. What is syringomalacia? What are its clinical features?
12. What is aphasia? What are the causes of aphasia?
13. What is a demyelinating disease? List some demyelinating diseases that affect the speech and hearing mechanism.
14. What are the clinical features of neurogenic dysphagia?
15. What is subdural hematoma and epidural hematoma?
16. What is the role of cognition in communication?
17. Write a short note on alcoholic cerebellar degeneration.
18. List and define the various tumors of the CNS.





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MAX MARKS: 80

Otolaryngology
QP Code: S2330

Your answers should be specific to questions asked.
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Long Essay

2 X 10 = 20 marks

1. Describe the prenatal development of inner ear. What are the causes of congenital inner ear anomalies?
2. Discuss, in detail, the audiological manifestations of a pathological middle ear.

Short Essays

6 X 5 = 30 marks

3. Describe any two congenital malformations of the external ear.
4. What is otosclerosis? Describe its pathophysiology, clinical features and management.
5. What is Benign Paroxysmal Positional Vertigo? What are its signs and symptoms?
6. Describe the benign tumors of the oral cavity.
7. Describe the growth of larynx from infancy to adulthood.
8. Discuss in brief the process of peristalsis.

Short Answers

10 X 3 = 30 marks

9. Mention the different types of otitis media.
10. Mention the etiology of tympanic membrane perforation.
11. Explain the functions of nasopharynx and hypopharynx.
12. List the sites of cancer of the lip and oral cavity.
13. List the sign and symptoms of chronic pharyngitis.
14. List the clinical features of nasopharyngeal cancer.
15. Describe briefly the structure of esophagus.
16. Discuss, in brief, the procedure for intubation.
17. What are the different methods of clinical examination of esophagus?
18. What is congenital esophageal pouch? What are its symptoms?





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MAX MARKS: 80

Speech-language Pathology
QP Code: S2340

*Your answers should be specific to questions asked.
Draw neat labelled diagrams wherever necessary*

Long Essay

2 x 10 = 20 marks

1. How do you assess a child with unclear speech?
2. Write an overview of the assessment of language disorders in children.

Short Essays

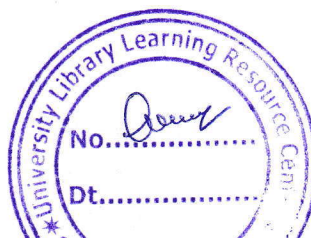
6 x 5 = 30 marks

3. Draw a block diagram of SLPM model.
4. Explain the different steps involved in speech and language therapy.
5. Write the disadvantages of individual and group therapy.
6. Briefly explain any 5 phonological processes.
7. List out any 10 early indicators of language disorders.
8. Write a short note on PWD Act.

Short Answers

10 x 3 = 30 marks

9. Write a note on interview as a diagnostic tool.
10. Name any three types of diagnosis.
11. What are the three aspects of questionnaire?
12. Define impairment, disability, and handicap.
13. What is a 'goal' in speech-language therapy? Write a short note on 'long term' and short term goal.
14. What are the three approaches to speech-language therapy? Describe.
15. Explain the importance of documentation in patient care.
16. What is the importance of evidence based practice?
17. Explain briefly the variables impacting therapy outcomes.
18. Explain briefly the role of itinerant speech therapist.





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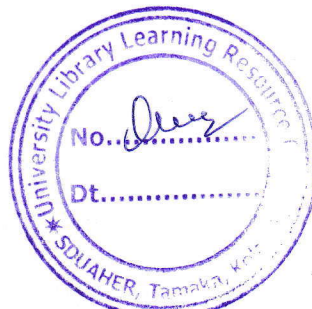
TIME –2.30 Hrs.

MAX MARKS: 80

Audiology
QP Code: S2350

Your answers should be specific to questions asked.
Draw neat labelled diagrams wherever necessary

- I Long essay** 2x10=20 marks
- 1 Describe in detail the characteristics of conductive hearing loss
 - 2 Explain how Rinne test is performed and interpreted along with its advantages and disadvantages
- II Short essay** 6x5=30 marks
- 3 Describe circum-aural earphones. List out the advantages and disadvantages over supra-aural earphones
 - 4 What is SRT-PTA correlation? What factors may contribute to a disagreement between SRT and PTA? How do you resolve the disagreement?
 - 5 What is daily listening check? What are the steps carried out during daily listening check?
 - 6 Discuss the interpretation of audiogram as an aid to diagnosis
 - 7 What is redundancy in hearing? Explain intrinsic and extrinsic redundancy with appropriate examples
 - 8 Describe Hood's plateau method for obtaining masked thresholds
- III Short answer** 10x3=30 marks
- 9 Justify the need for separate case history forms for children and adults.
 - 10 How is hearing loss classified based on the time of onset?
 - 11 What is a spondee? Why are spondees preferred for speech recognition threshold estimation?
 - 12 What is VU meter in an audiometer? What does the deflections on the VU meter indicate?
 - 13 What is masking dilemma? Mention any two solutions for overcoming masking dilemma.
 - 14 What is speech detection threshold? What are the indications for testing the same?
 - 15 What is objective calibration? When is it indicated?
 - 16 What is non-organic hearing loss? Mention any two behavioural patterns indicating non-organic hearing loss.
 - 17 Mention the factors related to equipment and test environment which could affect estimation of bone conduction thresholds.
 - 18 What are the skills and behaviours expected of a clinician while taking case history?





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TIME –2.30 Hrs.

MAX MARKS: 80

Electronics and Acoustics

QP Code: S2360

*Your answers should be specific to questions asked.
Draw neat labelled diagrams wherever necessary.*

Long Essay

2 X 10 = 20 marks

1. Discuss the four major functions of the operating system in a computer.
2. Explain the functioning of an audiometer with a block diagram.

Short Essays

6 X 5 = 30 marks

3. Draw the frequency response of a low pass, high pass, band pass and notch filter.
4. State and explain the Nyquist criteria. What is its role in the sampling process of analog to digital conversion?
5. With a block diagram, illustrate how an Automatic speech recognition system is implemented.
6. With a diagram, illustrate the structure and functioning of a liquid crystal display.
7. What is a Hard disk? Explain the role of hard disk in a computer
8. Explain the role of rectifier and filter in the DC power supply of an audiometer.

Short Answers

10 X 3 = 30 marks

9. Write short note on Delta function
10. Write short note on Impulse response
11. Compare a digital signal with a continuous signal and discrete signal.
12. Explain the functions of a capacitor.
13. Define absorption co-efficient.
14. State and explain the relationship between frequency and wavelength of sound.
15. Which type of microphone is used for measuring sound? Why?
16. What is a spectrogram?
17. How is a complex tone different from a pure tone?
18. Write short note on reverberation

