

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

[AHS 0524]

MAY 2024

Sub. Code: 3114

**M.Sc. SPEECH LANGUAGE PATHOLOGY
FIRST SEMESTER (From 2023-2024 Batch onwards)
PAPER IV – NEUROBIOLOGY OF SPEECH – LANGUAGE AND
COGNITION**

Q.P. Code: 283114

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Explain different types of attention with examples.
2. Discuss various neural networks involved in speech-language processing through behavioral, neuroimaging, and evoked potential studies in normal and persons with neurological disorders.

II. Write notes on:

(10x6=60)

1. Brain plasticity.
2. Neurotransmitters in neuropathological conditions affecting speech, language and communication.
3. Clinical examination of sensory and motor functions.
4. Magnetoencephalography.
5. Differentiate various types of memory with suitable examples.
6. Models of Cognitive Linguistic Process.
7. Neural network for word recognition through various sensory systems.
8. Representation of languages in the brain.
9. Neurophysiological changes with age.
10. Effect of aging on pathological conditions.

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

[AHS 0525]

MAY 2025

Sub. Code:3114

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Q.P. Code: 283114

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Neural basis for cognitive processes and its relation to language processing.
2. Types and classification of neurotransmitters and their role in signal propagation in normal and neuro pathological conditions.

II. Write notes on:

(10x6=60)

1. Blood supply to brain.
2. Electromyography.
3. Representation of languages in the brain in bilinguals.
4. Priming and its types.
5. Functional organization of brain.
6. Broadbent's Bottleneck Model.
7. Visual word recognition.
8. Interactive Model.
9. Neural network of reading, writing and spelling.
10. Effects of aging in cognition and speech perception.
