

NEURO PSYCHOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	A patient with localized brain damage shows loss of speech production but intact comprehension. Which method historically helped establish such brain-behavior relationships? i) fMRI ii) Lesion studies iii) EEG iv) PET	K1	CO1
	2	Recovery of function after brain injury through recruitment of alternate neural pathways BEST represents: i) Neural degeneration ii) Fixed localization iii) Neuroplasticity iv) Reflex action	K2	CO1
2	3	Which brain lobe is primarily responsible for executive functions such as planning and decision-making? i) Occipital ii) Temporal iii) Frontal iv) Parietal	K1	CO2
	4	A patient ignores one side of space despite intact vision. This condition is BEST identified as: i) Agnosia ii) Apraxia iii) Hemispatial neglect iv) Amnesia	K2	CO2
3	5	Progressive memory decline due to cortical degeneration is characteristic of: i) Parkinson's disease ii) Alzheimer's disease iii) Epilepsy iv) ADHD	K1	CO3
	6	Traumatic Brain Injury MOST commonly results in: i) Only motor deficits ii) Only sensory deficits iii) Cognitive and emotional impairments iv) Reflex abnormalities	K2	CO3
4	7	Which technique measures electrical brain activity with high temporal resolution? i) PET ii) fMRI iii) EEG iv) CT	K1	CO4
	8	Poor performance in Stroop test primarily indicates impairment in: i) Memory ii) Executive control iii) Sensory processing iv) Motor coordination	K2	CO4
5	9	Neurofeedback training enables individuals to: i) Replace neurons ii) Regulate brain activity iii) Block neural signals iv) Enhance reflexes	K1	CO5
	10	Which is a major ethical concern in neural enhancement technologies? i) Reflex delay ii) Cognitive inequality iii) Sensory loss iv) Motor fatigue	K2	CO5

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a	A researcher attempts to study decision-making using both fMRI and lesion data but arrives at conflicting interpretations. Analyze how different research methods in neuropsychology may lead to such discrepancies, and discuss their complementary value.	K4	CO1
		(OR)		
	11.b	Critically compare clinical neuropsychology and cognitive neuroscience in terms of their assumptions about brain-behavior relationships and the implications for real-world application.		

Cont...

2	12.a	A patient presents with intact sensory abilities but shows severe deficits in spatial awareness and object localization. Examine the possible neural basis of this condition with reference to functional organization of the brain.	K4	CO2
		(OR)		
	12.b	Analyze how interactions between different brain lobes can result in complex behavioral outcomes, using appropriate clinical examples.		
3	13.a	Following a traumatic brain injury, a patient shows deficits in attention, emotion regulation, and memory. Evaluate the nature of these impairments and propose appropriate rehabilitation priorities.	K5	CO3
		(OR)		
	13.b	Compare neurodegenerative disorders and neurodevelopmental disorders in terms of onset, progression, and neuropsychological impact, with suitable examples.		
4	14.a	Traditional neuropsychological tests often fail to predict real-world functioning. Critically evaluate the ecological validity of these assessments.	K5	CO4
		(OR)		
	14.b	Analyze how AI-based neuropsychological assessment tools are transforming diagnosis, and discuss the associated limitations and ethical concerns.		
5	15.a	Examine the effectiveness of neurofeedback and brain stimulation techniques (TMS, tDCS) in neuropsychological rehabilitation.	K5	CO5
		(OR)		
	15.b	Evaluate the ethical and societal implications of cognitive enhancement and neural augmentation technologies.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Neuroplasticity is not merely recovery but adaptive reorganization. Critically discuss this statement with reference to mechanisms, research evidence, and clinical implications.	K5	CO1
2	17	Critically examine brain lateralization and discuss how atypical lateralization contributes to neuropsychological disorders.	K4	CO2
3	18	Integrate neurobiological and psychological perspectives to evaluate psychiatric disorders such as schizophrenia and depression.	K5	CO3
4	19	Design a comprehensive neuropsychological assessment protocol for evaluating executive functioning and memory in a clinical setting, justifying your choices.	K6	CO4
5	20	The future of neuropsychology lies at the intersection of AI, brain-computer interfaces, and integrative approaches. Critically discuss with applications and ethical challenges.	K6	CO5

Z-Z-Z

END