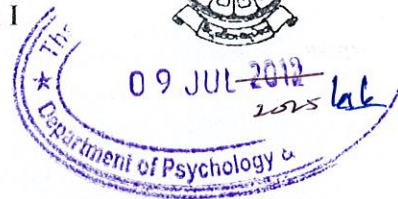




THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF PSYCHOLOGY & COUNSELLING  
ACADEMIC YEAR 2024/2025 – SEMESTER I



BSC HONS IN PSYCHOLOGY  
PLU3311– COGNITIVE PSYCHOLOGY - LEVEL III  
CONTINUOUS ASSESSMENT TEST – NBT I  
DURATION: 1 ½ HOURS



DATE: 09<sup>th</sup> July 2025

TIME: 02.00 p.m. – 3.30 p.m.

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**IMPORTANT INSTRUCTIONS/ INFORMATION TO CANDIDATES**

- This question paper consists of **NINE** pages with **TWO** sections
- **Section 1: 20 Multiple Choice Questions - (40 Marks)**
- **Section 2: 12 Short Answer Questions - (60 Marks)**
- Write your INDEX number in the space provided.
- **Multiple Choice Questions (Section 1):** Indicate answers in the **ANSWER SHEET** provided by placing a cross (X) in **INK** in the relevant cage (answers in pencil will **NOT** be marked)
- **Short Answer Questions (Section 2):** Write the answer within the space provided.
- Do **NOT** remove any page/part of this question paper from the examination hall.
- Do **NOT** keep unauthorized materials, including mobile phones and other electronic equipment, with you during the examination.

**SECTION 1: Multiple Choice Questions (20 Questions-40 Marks)**

- 1.1 Cognitive psychology emerged to address the limitations of studying only observable behavior. What is the primary focus of cognitive psychology?
- a The study of animal behavior.
  - b The study of observable behavior only.
  - c The study of mental processes and how they influence behavior.
  - d The study of personality traits and personality characteristics.
- 1.2 There are several distinct approaches used to study cognition in psychology. Which of the following is a characteristic of experimental cognitive psychology?
- a Focus on naturalistic observation
  - b Use of animal testing only
  - c Conducting controlled laboratory experiments
  - d Studying cultural impacts on cognition
- 1.3 Some areas of cognitive psychology involve the use of technology and medical equipment. Which of the following approaches focuses on identifying the relationship between brain structures and mental functions using tools like MRI and PET scans?
- a Behavioral psychology
  - b Cognitive neuroscience
  - c Developmental psychology
  - d Social cognition
- 1.4 Research into brain damage can provide insight into normal cognitive functioning. What is the primary method used in cognitive neuropsychology to study cognition?
- a Simulation of artificial intelligence
  - b Observation of behavior in natural settings
  - c Analysis of patients with brain injuries
  - d Measuring intelligence through standardized tests
- 1.5 Some researchers use artificial models to understand how the mind works. What is the goal of computational cognitive psychology?
- a To develop advanced scanning tools for brain research in medicine
  - b To simulate mental operations using carefully designed computer models
  - c To invent innovative tools for measuring human mental performance
  - d To provide practical training for therapists in cognitive techniques

- 1.6 Certain historical cases have contributed greatly to our understanding of brain function. What cognitive ability was primarily affected in the case of Phineas Gage after his frontal lobe injury?
- a Language development
  - b Emotional regulation and social behavior
  - c Basic sensory perception
  - d Visual memory
- 1.7 Various structures in the human brain contribute differently to cognitive processes. Which of the following brain regions is primarily responsible for executive functioning?
- a Temporal Cortex
  - b Cerebellum
  - c Prefrontal Cortex
  - d Occipital Cortex
- 1.8 Chemical messengers influence behaviour and cognition in different ways. What distinguishes neurotransmitters from hormones in terms of action?
- a Neurotransmitters act slowly, while hormones act quickly
  - b Hormones use synapses, and neurotransmitters use blood vessels
  - c Neurotransmitters have short-term effects; hormones have longer-term effects
  - d Hormones originate in neurons; neurotransmitters in glands
- 1.9 Some hormones are involved in short-term stress responses. Which of the following hormones is primarily responsible for the "fight or flight" response during acute stress?
- a Estrogen
  - b Oxytocin
  - c Cortisol
  - d Epinephrine
- 1.10 Visual and verbal information are processed by different systems in the brain. During a presentation, a student used a visual map along with his speech to explain city traffic routes. According to Baddeley and Hitch's working memory model, which of the following two components were likely active during the presentation?
- a Central executive and episodic memory
  - b Episodic buffer and sensory memory
  - c Phonological loop and visuospatial sketchpad
  - d Long-term memory and sensory store
- 1.11 Chemical messengers are essential for transmitting signals between neurons. Which of the following structures in the neuron releases neurotransmitters into the synaptic cleft?
- a Axon hillock
  - b Dendrite
  - c Terminal bulb
  - d Cell body

- 1.12 Sensory input can be processed in different directions depending on the cognitive task. Which of the following best represents as an example of top-down processing?
- a Noticing a loud bang and looking around in fear
  - b Reading a scrambled word in a sentence correctly
  - c Feeling a sharp object when you accidentally step on it
  - d Detecting the color red in a flashing light
- 1.13 Human memory involves both automatic and intentional systems of information storage. Which of the following best describes non-declarative memory?
- a It involves facts and events that require conscious recall.
  - b It stores visual and auditory information for a brief period.
  - c It controls behaviors unconsciously without deliberate effort.
  - d It refers to semantic knowledge stored in the long term memory.
- 1.14 Understanding memory models helps explain how we process different types of information. According to the Multistore Model by Atkinson and Shiffrin (1968), which of the following memory stores has the shortest duration?
- a Long Term Memory
  - b Short Term Memory
  - c Working Memory
  - d Sensory Memory
- 1.15 Various theories have been proposed to explain why forgetting occurs over time. According to the decay theory, why do individuals often forget information that is not used or revisited for a long time?
- a It becomes unconsciously repressed
  - b It is replaced by newer information
  - c The memory trace weakens
  - d Retrieval cues become misleading
- 1.16 Some forms of forgetting are believed to occur because of emotional defense mechanisms. A war veteran is unable to remember a traumatic incident from combat despite no apparent brain injury. Which of the following concepts best explains this scenario?
- a Retroactive interference
  - b Repression
  - c Anterograde amnesia
  - d Rehearsal failure

- 1.17 Real-life situations often show how similar memories can compete with one another. Sasha keeps entering her old ATM PIN instead of the new one she recently changed. Which of the following processes of forgetting does this illustrate?
- a Cue-dependent forgetting
  - b Proactive interference
  - c Repression
  - d Anterograde amnesia
- 1.18 Hormones influence cognition differently than neurotransmitters by traveling through the circulatory system. Which of the following hormones is often called the “love hormone” due to its association with intimacy?
- a Cortisol
  - b Testosterone
  - c Estrogen
  - d Oxytocin
- 1.19 Evolution has shaped different parts of the brain to handle various survival and cognitive functions. Which of the following brain regions is primarily responsible for basic survival functions such as heart rate and breathing?
- a Forebrain
  - b Midbrain
  - c Hindbrain
  - d Cerebral cortex
- 1.20 Neurons communicate through electrical and chemical processes. What is the name of the electrical impulse that travels along a neuron?
- a Synapse
  - b Action potential
  - c Neurotransmitter
  - d Refractory period

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**ANSWER SHEET FOR SECTION-I**

| Q. No. | (a) | (b) | (c) | (d) |
|--------|-----|-----|-----|-----|
| 1.1    |     |     |     |     |
| 1.2    |     |     |     |     |
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| 1.18   |     |     |     |     |
| 1.19   |     |     |     |     |
| 1.20   |     |     |     |     |

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## SECTION 2: SHORT ANSWER QUESTIONS (60 MARKS)

All Questions are compulsory.

- 2.1 Name two (02) types of variables that affect the reliability of eyewitness testimony. (5 marks)  
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- 2.2 What is the difference between the Spotlight Model and Zoom Lens Model of visual attention? (5 marks)  
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- 2.3 List three (03) key factors that influence the ability to perform dual tasks effectively. (5 marks)  
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- 2.4 What does the “Cocktail Party Effect” reveal about how we focus our auditory attention? (5 marks)  
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- 2.5 Name two (02) types of variables that affect the reliability of eyewitness testimony. (5 marks)  
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2.6 What is the “Other Race Effect” in eyewitness identification? (5 marks)

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2.7 List three (03) factors that influence perception. (5 marks)

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2.8 How does bottom-up processing influence perception? Give an example. (5 marks)

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2.9 What was the main finding of Loftus & Palmer’s car accident experiment? (5 marks)

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2.10 What are the four (04) stages of the perceptual process? (5 marks)

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2.11 What is the main difference between monocular and binocular depth cues? (5 marks)

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2.12 What is meant by the Gestalt principle “figure-ground relationship”? (5 marks)

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-----END OF QUESTION PAPER-----

