

INSTRUCTIONS TO CANDIDATES:

This paper consists of **THREE** sections

SECTION A questions are worth 5 marks each. You must answer **three** questions from this section (15 marks in total)

SECTION B questions are worth 10 marks each. You must answer **four** questions from this section (40 marks in total)

SECTION C questions are worth 15 marks each. You must answer **three** questions from this section (45 marks in total)

ALL of your answers should be written in your examination answer booklet, **NOT** on this question paper.

Please clearly indicate on the front of your examination answer booklet the question number of each question attempted.

Section A Answer **three** questions from this section

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|----|--|---------|
| 1. | Name five of the major internal features of a typical neuron | 5 marks |
| 2. | What are the five levels of hierarchical organisation in the human sensory system? | 5 marks |
| 3. | Name five of the protective structures in the human brain | 5 marks |
| 4. | Briefly describe the two tests that can be used to explore infantile amnesia | 5 marks |
| 5. | Name and briefly describe the three phases of energy metabolism involved in eating | 5 marks |
| 6. | Name the four main routes of drug administration | 5 marks |

Section BAnswer **four** questions from this section

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| 7 | Compare and contrast Electroencephalography (EEG) with functional Magnetic Resonance Imaging (fMRI) | 10 marks |
| 8 | Describe the process of neurotransmitter activity in the terminal button, synaptic cleft and at the post-synapse | 10 marks |
| 9 | Briefly discuss the efficacy of potential treatments for Tourette Syndrome | 10 marks |
| 10 | Briefly describe the neuropathology of Alzheimer's Disease | 10 marks |
| 11 | Briefly describe the main memory locations identified in the human brain and explain why the brain may have developed these separate locations for memory storage | 10 marks |
| 12 | Briefly explain how the somatosensory system responds to stimuli and transmits information to the central nervous system | 10 marks |
| 13 | Briefly explain the process of an action potential in a myelinated axon after a firing threshold is reached | 10 marks |
| 14 | Briefly explain 'blindsight' and provide a possible explanation for its occurrence | 10 marks |

Section C

Answer **three** questions from this section

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|-----------|---|-----------------|
| 15 | Briefly evaluate the evidence for structural and functional double-dissociations within the brain. | 15 marks |
| 16 | Briefly evaluate the evidence for a 'set-point' theory of eating | 15 marks |
| 17 | Briefly evaluate the dopamine theory of schizophrenia | 15 marks |
| 18 | Describe the three paradoxes of pain and explain the issues that they present for a 'gate theory' of pain | 15 marks |
| 19 | Briefly evaluate the role of contingency learning in drug tolerance and addiction | 15 marks |
| 20 | Briefly evaluate the neural regeneration argument | 15 marks |

Please ensure that you have clearly indicated the question number next to each answer, and that you have indicated which questions you have answered on the front of your examination answer booklet.