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## PARUL UNIVERSITY FACULTY OF ARTS

M. Arts Midterm Examination 2022-23

Semester: - III
Subject Code: -15203202
Subject Name: - (Physiological Psychology I)

Date: 03/08/2022
Time: (2 hours)
Total Marks: 40

## Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

|  | Do As Directed. |  |  |  | Marks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Q. 1 |  |  |  |  | 06 |
| 1 | In human patients, EEG activity is commonly recorded directly from |  |  |  |  |
|  | (A) | Muscle | (B) | Hippocampus |  |
|  | (C) | Scalp | (D) | Heart |  |
| 2 | The outer covering of the cerebral hemisphere |  |  |  |  |
|  | (A) | Cerebral cortex | (B) | Neocortex |  |
|  | (C) | Allocortex | (D) | Paleocortex |  |
| 3 | The speed that an action potential travels down an axon is increased by |  |  |  |  |
|  | (A) | An increase in the intensity of the evoking stimulus | (B) | Increased activity by auto receptors |  |
|  | (C) | The presence of a myelin sheath | (D) | The absence of lateral inhibition |  |
| 4 | Saltatory conduction refers to |  |  |  |  |
|  | (A) | Production of an action potential by the movement of sodium ions. | (B) | Transmission of an impulse along a myelinated axon |  |
|  | (C) | Transmission of impulses along dendrites | (D) | Transmission of an impulse between one neuron and another |  |
| 5 | What are the nodes of Ranvier? |  |  |  |  |
|  | (A) | Gates in the membrane that admit all ions freely | (B) | Branching points in an axon |  |
|  | (C) | Places where dendrites join the cell body | (D) | Interruptions in the myelin sheath |  |
| 6 | The function of a myelin sheath is to |  |  |  |  |
|  | (A) | Prevent action potentials from traveling in the wrong direction | (B) | Increase the velocity of transmission along an axon |  |
|  | (C) | Increase the magnitude of an action potential | (D) | Enable an action potential in one cell to influence the transmission in other cells |  |
| 7 | According to the all or none law, |  |  |  |  |
|  | (A) | Every depolarization produces an action potential | (B) | Every hyperpolarization produces an action potential |  |
|  | (C) | The size of the action potential is independent of the strength of the | (D) | Every depolarization reaches the threshold, even if it fails to produce |  |


|  |  | stimulus that initiated it |  | an action potential |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | In the human brain, glia cells are |  |  |  |  |
|  | (A) | Larger than neurons | (B) | Capable of transmitting impulses when neurons fail to do so |  |
|  | (C) | More numerous than neurons | (D) | Like neurons, except that they lack axons |  |
| 9 | A neuron that conveys information toward the hippocampus is considered a (an)$\qquad$ cell, with regard to the hippocampus. |  |  |  |  |
|  | (A) | Afferent | (B) | Efferent |  |
|  | (C) | Intrinsic | (D) | Motor |  |
| 10 | Which part of a neuron contains the nucleus? |  |  |  |  |
|  | (A) | Cell body | (B) | Dendrite |  |
|  | (C) Axon <br> The central nervous system is made up of |  |  | Presynaptic ending |  |
| 11 |  |  |  | and |  |
|  | (A) | Autonomic nervous system, somatic nervous system | (B) | Cerebrum, cerebellum |  |
|  | (C) | Sympathetic division, parasympathetic division | (D) | Brain, spinal cord |  |
| 12 | Acetylcholine is an enzyme that |  |  |  |  |
|  | (A) | Synthesizes acetylcholine from constituents of the diet | (B) | Increases the sensitivity of the postsynaptic cell to acetylcholine |  |
|  | (C) | Blocks further release of the transmitter acetylcholine |  | Breaks acetylcholine down, after its release, into less active components |  |
| B. | Terms/ Short Notes/ Case Study/ Charts/ Graphs/ Tables, etc. (Each of 01 mark) |  |  |  | (04) |
| 1 | Define Biopsychology. |  |  |  |  |
| 2 | What are cranial nerves? |  |  |  |  |
| 3 | Name the two types of neurons. |  |  |  |  |
| 4 | What is synapse? |  |  |  |  |
| Q. 2 | Answer the following. |  |  |  |  |
| 1 | Explain the mind brain relationship. |  |  |  | (04) |
|  | Explain stereotaxic surgery. |  |  |  | (04) |
|  | OR |  |  |  |  |
| 2 | Explain neural conduction. |  |  |  | (04) |
| Q. 3 | Answer the following. |  |  |  |  |
| 1 | Describe chemical methods of research in biopsychology. |  |  |  | (05) |
|  | Explain the scanning methods of research in biopsychology. |  |  |  | (05) |
|  | OR |  |  |  |  |
| 2 | Discuss the communication between neurons. |  |  |  | (05) |
| Q. 4 | Answer the following. |  |  |  |  |
| 1 | Explain the origins of biopsychology. |  |  |  | (06) |
| 2 | Discuss synaptic conduction. |  |  |  | (06) |
|  | OR |  |  |  |  |
| 2 | Describe the types of neurotransmitters. |  |  |  | (06) |

