

**PARUL UNIVERSITY**  
**FACULTY OF ARTS**  
**B.Arts Summer 2018 – 19 Examination**

Semester: 3

Subject Code: 15105201

Subject Name: Biological Basis of Behavior

Date: 01/05/2019

Time: 10.30 am to 1.00 pm

Total Marks: 60

**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.

**Q.1 Do as directed.****(08)****A. Multiple choice type questions. (Each of 0.5 mark)**

1. Schwann cells in the peripheral nervous system, forming a protective covering called a \_\_\_\_\_  
 (a) Dendrite (c) Axon  
 (b) Myelin Sheath (d) Node of Ranvier
2. Which neurons have more than one neurite, usually one axon and one or more than one dendrites.  
 (a) Bipolar (c) Unipolar  
 (b) Association neurons (d) Multi-polar neurons
3. \_\_\_\_\_ part of hindbrain affects respiratory movement and facial expression  
 (a) Medulla (c) Pons  
 (b) Cerebellum (d) All of the above
4. The hypothalamus regulates \_\_\_\_\_  
 (a) Heart rate (c) Water level  
 (b) Body temperature (d) All of the above
5. The group of brain structure the influences emotion, motivation, and consequently the individual's survival, is known as the \_\_\_\_\_  
 (a) cerebral cortex (c) reticular formation  
 (b) limbic system (d) endocrine system
6. Chemicals secreted by neurons that provide the means of synaptic transmission are  
 (a) Action potential (c) Neurons  
 (b) Neurotransmitter (d) Hormones
7. The average weight of human brain is \_\_\_\_\_  
 (a) 1.26 kilograms (c) 1.36 kilograms  
 (b) 1.46 kilograms (d) 1.56 kilograms
8. Autonomic nervous system is responsible for \_\_\_\_\_  
 (a) Spinal and Cranial nerves (c) Connects nerves system to involuntary action  
 (b) Brain and spinal cord (d) Voluntary actions of muscles
9. The neurotransmitter associated with the onset of anxiety is known as \_\_\_\_\_  
 (a) Gamma amino butyric acid (c) Acetylcholine  
 (b) endorphins (d) Dopamine
10. Mesencephalon is a sub division of \_\_\_\_\_  
 (a) Mid brain (c) Hind brain  
 (b) Fore brain (d) Cerebellum
11. The brain and the rest of the CNS are further protected against injury by  
 (a) cerebrospinal fluid (c) Spinal Bone  
 (b) Dura mater (d) pia mater
12. Depression and suicide is often associated with low level of \_\_\_\_\_  
 (a) Serotonin (c) Acetylcholine  
 (b) Dopamine (d) Nitric Oxide
13. Loss of Blood volume causes \_\_\_\_\_ thirst.  
 (a) Sodium specific craving (c) Hypovolemic Thirst  
 (b) Osmotic thirst (d) None of the above

14. Which part of brain is control area for feeding.
- (a) Lateral Hypothalamus (c) Cerebrum  
 (b) Brain Stem (d) None of the above
15. \_\_\_\_take care for overeating and weight gain.
- (a) Lateral Hypothalamus (c) Ventromedial Hypothalamus  
 (b) Brain Stem (d) None of the above
16. The brain and the rest of the CNS are further protected against injury by \_\_\_\_.
- (a) Muscles (c) Cerebrospinal fluid  
 (b) Brain Stem (d) None of the above

**B. Define the Following. (Each of 01 mark)**

**(07)**

1. Neurotransmitters
2. The Spinal Cord
3. Serotonin
4. Oxytocin.
5. Give two types of long term Memory
6. Rod of Ranvier
7. Cerebellum

**Q.2 Answer the following.**

- A. Name and explain the lobes in human brain?  
 B. Name and types of Neuron.  
 C. Explain Cerebral Cortex.

**(04)**  
**(04)**  
**(04)**

**OR**

- C. Explain Norepinephrine (Noradrenalin) hormone.

**(04)**

**Q.3 Answer the following.**

- A. Draw Neurons and explain parts of neurons.  
 B. Explain Spinal Pathways.  
 C. Explain Sleep stages with relation to arousal, emotion and attention

**(05)**  
**(05)**  
**(05)**

**OR**

- C. Explain Thalamus and Hypothalamus.

**(05)**

**Q.4 Answer the following.**

- A. Explain Nerve Impulse Transmission in detail.  
 B. Explain Chemical sense or multiple causes of drinking.  
 C. Explain Central Nervous System in detail.

**(06)**  
**(06)**  
**(06)**

**OR**

- C. Chemical sense or Physiological mechanism of hunger.

**(06)**