

Enrollment No. _____



NAVRACHANA UNIVERSITY
a UGC recognized University

School: School of Science
Program/s: Biomedical Science
Year: 3rd **Semester:** V
Examination: End Semester Examination
Examination year: December - 2022

Course Code: BM303
Date: 6/12/2022
Time: 2:30 pm to 4:30 pm

Course Name: Neuroscience
Total Marks: 40
Total Pages: 2

Instructions:

- Draw labelled diagrams where ever necessary
- * COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	<p>Objective Type Questions (11 x 1 mark = 11 marks)</p> <p>1. This neurotransmitter affects mood regulation, sleep/wake cycles, temperature regulation, sexual activity, and aggression:</p> <p>a. Norepinephrine c. Dopamine b. Epinephrine d. Serotonin</p> <p>2. Which is NOT a characteristic of neurotransmitters?</p> <p>a. The substance must be released in response to presynaptic depolarization. b. The release must be Ca²⁺ independent. c. The substance must be present within the presynaptic neuron. d. Specific receptors for the substance must be present on the postsynaptic cell/membrane.</p> <p>3. Cerebrospinal fluid communicates with the subarachnoid space via the</p> <p>a. 4th ventricle c. 3rd ventricle b. subarachnoid granulations d. choroids plexus</p> <p>4. _____ generated during the Krebs cycle is transaminated to form glutamate.</p> <p>5. Epinephrine is methylated to inactive products by _____ enzymes in kidney and brain.</p> <p>6. Phencyclidine was originally developed as _____ and its overuse causes _____.</p> <p>7. _____ enzyme is the marker for cholinergic neurons.</p>	8	CO1, CO2, CO3	BT1, BT3, BT4

	8. Name any one myelin protein and myelin lipid along with their function.			
Q.2	Answer in brief (Any Six) (6 x 2 marks = 12 marks) 1. What is the similarity in serotonin and epinephrine in terms of their synthesis?? 2. What are the regulatory systems of ANS? 3. Define meninges with their function. 4. Microglia exhibits classical morphologies in different conditions. Give a brief about various microglial states in various environments. 5. Apart from nervous system, where else is serotonin found and what is its functions? 6. Explain the statement "Neurotransmitter receptors are dynamic". 7. Describe, with examples, any means by which recreational drugs act on synapses.	12	CO1, CO2, CO3	BT1, BT3, BT4
Q.3	Answer in detail (Any Five) (5 x 4 marks = 20 marks) 1. How diverse are glutamate and GABA receptors? Explain in detail. 2. What are the various structural changes that occur in neuroplasticity? 3. Define ganglia. Enlist and describe the locations in human nervous system where you find the presence of ganglia. 4. With a suitable diagram, differentiate between somatic and autonomic nervous system. 5. What are the types of postsynaptic potentials? Why is integration of synaptic inputs necessary and what are the different types of integrations? 6. Describe in details the three types of receptor families present in nervous system. 7. Differentiate between Schwann cells and oligodendrocytes.	20	CO1, CO2, CO3	BT1, BT3, BT4

*****End of Question Paper*****