

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 7877

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Unique Paper Code : 2493010014

Name of the Paper : Neurobiology (DSE)

Name of the Course : **B.SC. (Hons.) Biochemistry (NEP)**

Semester : VIII

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. There are 6 questions.
2. Attempt any 4 questions. All questions carry equal marks.
3. Question No. 1 is compulsory.

1A. Expand and explain the function of the following:

- a. EEG
- b. NMDA
- c. CSF
- d. BBB
- e. RMP
- f. EPSP

B. Comment on the following:

- a. The spinocerebellar pathway coordinates postural motor movements.
- b. Experiencing phantom pain is due to axonal regeneration and neural plasticity.
- c. Dopamine is prescribed to patients suffering from depression.

(9, 6)

2. Differentiate between:

- a. Spatial and temporal summation
- b. Satellite cell and oligodendrocyte
- c. Meningitis and encephalitis
- d. Nicotinic and muscarinic receptors
- e. Autonomic and somatic motor systems

(3x5)

3. Diagrammatically represent:

- a. Synthesis, exocytosis and reuptake of glutamate neurotransmitter
- b. Synthesis and flow of the cerebrospinal fluid
- c. Anatomy of the brain
- d. Organization of the myelin sheath

(4, 4, 4, 3)

P.T.O.

- 4A. Explain four stages of neural tube development.
- B. Explain role of ion channels in generating an action potential.
- C. What is LTP? How does it help in learning?
- D. Explain Dale's principle? Do some neurons show a deviation from this principle? Comment.

(4, 4, 4, 3)

5. Explain the biochemical basis for the diseases:

- a. Parkinsons disease
- b. Multiple sclerosis
- c. Myasthenia gravis
- d. Huntington's chorea
- e. Alzheimer's disease

(3x5)

6. Write short notes on the following (any three):

- a. Pain perception
- b. Nerve regeneration
- c. Brain meninges
- d. Sleep

(5x3)