

PHYSIOLOGY

PAPER – III

PHY/D/16/36/III

Time : 3 hours

Max. Marks : 100

Important instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. Pathophysiology of Alzheimer's disease. 10
2. Compare and contrast the following: 5+5
 - a) Tremors of cerebellar and basal ganglia lesion.
 - b) Akinesia and rigidity of Parkinson's disease.
3. Olfactory pathway and physiological basis of olfaction. 4+6
4. a) Differentiate between the specific features of action potential recorded in nerve, skeletal muscle, smooth muscle and cardiac muscle. 6+4
 - b) Role of ions involved in them.
5. a) Photochemistry of vision. 6+4
 - b) Physiological basis of night blindness.
6. a) Neural substrate of speech. 6+4
 - b) Pathophysiology of language disorders.
7. a) Define neurotransmitter. 2+5+3
 - b) Site of synthesis, storage and mechanism of its removal.
 - c) Give examples of excitatory and inhibitory neurotransmitter operating in central nervous system.
8. a) Physiological basis of genesis of receptor potential. 5+3+2
 - b) Explain the phenomenon of receptor recruitment.
 - c) Sensory coding.
9. a) Give an account of the body's response to rotational acceleration and linear acceleration. (4+4)+2
 - b) Meniere disease.
10. a) Functional anatomy of the blood brain barrier. 5+5
 - b) Its functions and clinical implications.
