

**PHYSIOLOGY**  
PAPER – III

PHY/D/15/36/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.	What is strength-duration curve? What parameters are calculated from this? What is their clinical significance?	2+4+4
2.	a) What is electromyography? b) How it is recorded? c) Uses of electromyography and its clinical significance.	1+2+(2+5)
3.	a) Events taking place at neuromuscular junction in skeletal muscles. b) Myaesthesia gravis.	6+4
4.	a) List four differences between stretch and flexion reflex. b) Mechanism of after discharge in withdrawal reflex.	4+6
5.	a) Define pain and explain how pain is perceived by man b) Physiological basis of referred pain and neuropathic pain.	(1+3) (3+3)
6.	With the help of schematic diagram, explain activities in Direct and Indirect pathways in basal ganglia on posture and movement. Explain the physiological basis of use of a drug in the treatment of Parkinson's disease.	8+2
7.	a) Define sleep. b) What are the possible mechanisms of sleep? c) Characteristics of various types of sleep.	2+4+4
8.	Physiological basis of learning and memory.	10
9.	Physiology of cochlear microphonics	10
10.	Explain why the depth of the object cannot be appreciated in the dim light at night. Explain the neural process underlying appreciation of depth of the object.	4+6

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