

PHYSIOLOGY**PAPER-III**Time: 3 hours
Max. Marks:100

PHY/D/20/36/III

Important Instructions:

- **You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.**
- **Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.**
- **No additional supplementary answer sheet booklet will be provided.**
- 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. Describe important roles played by cerebellum and basal ganglia in voluntary control of motor activities. Name the areas and mechanisms involve in the feedback of this control. 5+(3+2)
2. Describe mode of action and regulation of insulin. What are the metabolic effects of insulin? (3+2)+5
3. Physiology of sleep cycle. Write a note on theories of sleep. 5+5
4. Describe the physiology of speech. What are speech disorders? 5+5
5. Trace pain pathway with suitable and labelled diagram. Write a note on mesencephalic descending pain suppressing pathway with its clinical importance. 5+3+2
6. Describe Olfactory pathway with suitable diagram. Write 2 important peculiarities of this pathway. 8+2
7. Steps and regulation of Spermatogenesis. 6+4
8. Describe nervous regulation of endocrine system. Explain neuro-endocrine reflex with suitable examples. 5+5
9. Describe the visual pathway in detail and discuss the various lesions of the same. Add a note on accommodation reflex. (5+3)+2
10. Synthesis, metabolism and functions of glucocorticoids. 2+2+6
