

NOVEMBER 2017

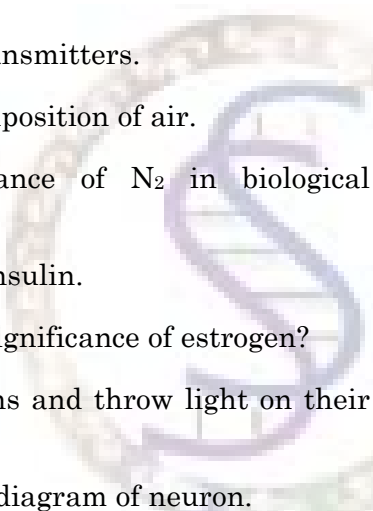
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Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Write a note on the composition of gastric juice.
 2. What is defecation?
 3. Describe portal circulation.
 4. What is the role of Vitamin K in blood clotting?
 5. Define Synapse.
 6. Name any two neurotransmitters.
 7. Write a note on the composition of air.
 8. What is the significance of N_2 in biological systems?
 9. Draw the structure of insulin.
 10. What is the biological significance of estrogen?
 11. List the plasma proteins and throw light on their functions.
 12. Draw a neatly labelled diagram of neuron.
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PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Explain the steps involved in the digestion and absorption of carbohydrates.
14. Write notes on the various blood groups and the immunological basis of the same.
15. Give an account of the structure and function of the different types of muscles.
16. Explain the role of kidney and lungs in maintaining the pH of blood.
17. How are hormones classified? Explain with suitable examples.
18. What do you understand by the term endocrine glands? Briefly discuss their role in metabolism.
19. Give a detailed account of enzymes and hormones in digestion.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain the mechanism of urine formation.
21. Draw a neatly labelled diagram of the heart. Highlight the systemic and pulmonary circulation.

22. Explain the mechanism of muscle contraction with suitable diagrams.
23. Explain the mechanism of gaseous exchange at the lungs and tissue and the role of partial pressures of O_2 and CO_2 in the same.
24. Describe the menstrual cycle and the role of sex hormones during the different stages.

