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B.Sc. (BIOTECHNOLOGY—MODEL III) DEGREE (CBCS) EXAMINATION JANUARY/FEBRUARY 2018

First Semester

B.Sc. Biotechnology

Core—BASIC LIFE SCIENCES

(2017 Admissions)

Time : Three Hours Maximum Marks : 60

Part A

Answer any **ten** *questions.*
Each question carries 1 *mark.*

1. What are guard cells ?
2. Give the names of any *two* micronutrients.
3. What is loop of Hence ?
4. Define residual capacity.
5. Name a neurotransmitter.
6. Define photoperiodism.
7. Give the functions of auxin as a plant growth regulator.
8. Define Synapse.
9. What are nastic movements ?
10. Define Anoxia.
11. State the function of RUBISCO.
12. Which part of the brain is involved in loss of control when a person drinks alcohol ?

(10 × 1 = 10)

Part B

Answer any **six** *questions.*
Each question carries 5 *marks.*

13. Describe the role of ADH in osmoregulation.
14. What are C4 plants ? Explain their special mechanism of photosynthesis.
15. What are the factors affections transpiration ?
16. Give the structure and function of harms globin.

Turn over

17. Give an account of different glands associated with digestive system and their functions.

18. Give the structure of neuron with a neat, labelled diagram.

19. Explain the role of different plant growth regulators in influencing growth in plants.

20. Define following terms :—

    Reflex action, stimulus, neurotoxin.

21. Explain in detail about Donnan Equilibrium.

(6 × 5 = 30)

Part C

Answer any **two** *questions.*
Each question carries 10 *marks.*

22. Discuss the type of movements observed in plants.

23. Explain the mechanism behind the formation of urine in mammals with the help of a neat, labelled diagram of nephron.

24. Describe synaptic transmission with a neat, labelled diagram of synapse.

25. Give an account of mechanisms of photosynthesis involving both cyclic and non-cyclic photophosphorylation.

(2 × 10 = 20)