E 6584

Reg. No.................................

Name.....................................

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, SEPTEMBER 2024

First Semester

Core Course I—BASIC LIFE SCIENCES

(For B.Sc. Biotechnology)

[2013—2016 Admissions]

Time : Three Hours
Maximum Marks : 80

Part A (Short Answer Questions)

Answer **all** *questions.*

Each question carries 1 *mark.*

1. What is Polyembryoni ?

2. What is mineral nutrition ?

3. Define transpiration.

4. What is vernalisation ?

5. What is Perianth ?

6. Name two abnormal constituents of urine.

7. What is a organizer ?

8. What are Vital Stains ?

9. Explain Fermentation ?

10. Write about a bisexual flower ?

$(10 \times 1 = 10)$

Part B (Brief Answer Questions)

Answer any **eight** *of the following.*

Each question carries 2 *marks.*

11. Write a note on ABO blood groups.

12. What is the significance of Juxtaglomerular apparatus (JGA) in Kidney function ?

Turn over

13. Enumerate the function of bile.

14. How artificial markings helps in fate map construction ?

15. What is amphimixis ?

16. Draw a vertical section of flower showing structure.

17. Differentiate chloride shift and Haldane effect.

18. What is microsporogenesis ?

19. What is the role of root pressures in the ascent of sap ?

20. What are the specific features of monocot embryos ?

21. What is fate map ?

22. Explain photoperiodism.

$(8 \times 2 = 16)$

Part C (Short Essay Questions)

Answer any **six** *of the following.*
Each question carries 4 marks.

23. Give an account on spermatogenesis.

24. Write a short account of factors which affect photosynthesis.

25. Write the differences between C_3 and C_4 plants.

26. What is lymph ? Give its composition and function ?

27. How is digested fat absorbed ?

28. Write an account on the stages of flower development.

29. Explain lymphatic system.

30. Write a note on respiratory system.

31. Explain the structure of a flower.

$(6 \times 4 = 24)$

Part D (Essay Questions)

Answer any **two** *of the following.*
Each question carries 15 *marks.*

32. Explain the mechanism of breathing with neat labelled sketches.

33. What are the indications for mineral deficiency in plants ?

34. Write an essay on Pollination in flowering plants.

35. What are the different steps involved in animal fertilization ?

(2 × 15 = 30)