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

First Semester

Core Course—METHODLOGY AND PERSPECTIVES OF SCIENCE AND AN INTRODUCTION TO THE WORLD OF PLANT DIVERSITY

(Common for B.Sc Botany Model I, Model II and B.Sc. Botany and Biotechnology)
[Double Core]

{2013 to 2016 Admissions}

Time: Three Hours Maximum Marks: 60

Part A

Answer all questions.

Each question carries 1 mark.

- 1. What is a null hypothesis?
- 2. Differentiate between treatments and replication.
- 3. List the contributions of Robert Koch.
- 4. Define biofuel.
- 5. What is a crustose lichen? Give an example.
- 6. List any *two* adaptations of mangroves.
- 7. What is VAM?
- 8. What is a heterotrichous habit?

 $(8 \times 1 = 8)$

Part B

Answer any six questions.

Each question carries 2 marks.

- 9. What is an observation? List the different types of observation.
- 10. List any four medicines derived from plants.

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- 11. Differentiate between coccus and vibrio bacteria.
- 12. What is alteration of generation?
- 13. List any four diagnostic features of fungi.
- 14. Point out the identifying features of epiphytic plants.
- 15. What is myrmecophylly? Mention its significance.
- 16. Mention the significance of review of literature in a scientific experiment.
- 17. List the advantages of fruits.
- 18. Mention the salient features of DNA.

 $(6 \times 2 = 12)$

Part C

Answer any **four** questions.

Each question carries 4 marks.

- 19. Give a brief account on variation in thallus morphology in algae.
- 20. Write a brief account on special structures which contributed to the development of seed in gymnosperms.
- 21. What are the different types of experiments? Explain.
- 22. What is testing of hypothesis? Mention the advantage statistical tools in biological sciences.
- 23. Explain Eichler's classification of eukaryotes.
- 24. Explain the process of cell division in living organisms.

 $(4 \times 4 = 16)$

Part D

Answer any two questions.

Each question carries 12 marks.

- 25. Give an account on morphological variation seen in angiosperms with examples.
- 26. Briefly explain terrestrial habitat diversity.
- 27. Describe evolution of sporophyte in pteridophyte.
- 28. Explain the uniqueness and importance of plants.

 $(2 \times 12 = 24)$

