

E 4713



Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, JULY 2023

Second Semester

Core Course

METHODOLOGY AND PERSPECTIVES OF SCIENCE

(Common For B.Sc. Bioinformatics, B.Sc. Biotechnology, BSc Electronics
and B.Sc. Computer Maintenance and Electronics)

[2013—2016 Admissions]

Time : Three Hours

Maximum Marks : 80

Part A (Short Answer Questions)

*Answer **all** questions.*

Each question carries 1 mark.

1. Define science.
2. What are the different science disciplines ?
3. What do you mean by hypothesis ?
4. Write short note on corroboration.
5. How do we design an experiment ?
6. Differentiate between repeatability and replication.
7. What is the necessity for units and dimensions ?
8. What do you mean by record keeping ?
9. List the different types of data.
10. What are the different methods to present data ?

(10 × 1 = 10)

Part B (Brief Answer Questions)

*Answer any **eight** questions.*

Each question carries 2 marks.

11. What do you mean by empiricism ?
12. Define the state laws of science.

Turn over





E 4713

13. Write notes on science as a human activity.
14. List the theories and laws in science.
15. What do you mean by simulation ?
16. What is the importance of peer review ?
17. Explain interpretation.
18. How do we select an instrument ?
19. Write short notes on human error.
20. What do you mean by human bias ?
21. What are the depositories of scientific information ?
22. Write short notes on null hypothesis.

(8 × 2 = 16)

Part C (Descriptive/Short Essay Type Questions)

*Answer any **six** questions.*

Each question carries 4 marks.

23. Write notes on scientific knowledge and practical knowledge.
24. Briefly explain the various revolutions in science and technology.
25. Compare mathematical methods and scientific methods of science.
26. Write short notes on: (i) Models ; and (ii) Virtual testing
27. What are the different types of experiments ? Explain.
28. Explain the various types of instrumentation.
29. Explain the great experiments in science with one example.
30. How can we report observational and experimental data ? Explain in detail.
31. Write notes on : (i) Publications and patents ; and (ii) Plagiarism

(6 × 4 = 24)





E 4713

Part D (Long Essays)

*Answer any **two** questions.*

Each question carries 15 marks.

32. Explain : (i) Knowledge ; (ii) Information ; and (iii) Scientific temper.
33. What are the different types of hypothesis ? Explain each in detail.
34. What are the different types of observations ? Explain in detail.
35. What are the different sources of knowledge sharing ? Explain in detail.

(2 × 15 = 30)

