

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MAY 2017**Second Semester****Core Course – METHODOLOGY AND PERSPECTIVES OF SCIENCE**

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

[2013 Admission onwards]

Time : Three Hours

Maximum Marks : 80

Part A (Short Answer Questions)

Answer all questions.

Each question carries 1 mark.

1. What is a parameter?
2. Name two types of electron microscopes.
3. What is virtual testing?
4. What is precision of an instrument?
5. What is adhoc hypothesis?
6. Explain 'Sampling'.
7. What is Robotics?
8. Explain 'Indirect investigation'.
9. What is IPR?
10. Mention uses of micrometer.

(10 × 1 =

Part B (Brief Answer Questions)

Answer any eight questions.

Each question carries 2 marks.

11. Explain deduction of scientific patterns and trends.
12. Write about importance of scientific evidences.
13. Write a note on Histograms.
14. What is null hypothesis?
15. Differentiate mean and median.
16. Explain ethics of Science.

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17. Write a short note on record keeping.
18. Write about significance of verification.
19. Explain deductive and inductive reasoning.
20. What is plagiarism?
21. What is sensory extension?
22. Mention significance of Peer review.

(8 × 2 = 16)

Part C (Short Essay Type)

Answer any six questions.

Each question carries 4 marks.

23. Write a note on types of data.
24. Differentiate corroboration and falsification.
25. Explain formulation and testing of hypothesis.
26. Describe planning of an experiment with example.
27. Explain controlled and uncontrolled observations.
28. Give an account on structure of a scientific paper.
29. Write about danger of preconceived ideas.
30. Describe revolutionary advancements in Science and Technology.
31. Explain principle and uses of one scientific instrument in a laboratory.

(6 × 4 = 24)

Part D (Long Essays)

Answer any two questions.

Each question carries 15 marks.

32. Write about design and documentation of experiments.
33. Differentiate Science and Pseudoscience. Write about theories, laws and disciplines in Science.
34. Explain significance of statistical tools in data interpretation.
35. Write a note on sharing of knowledge and depositories of scientific information.

(2 × 15 = 30)