

April 2025
B.A./B.Sc.
Sixth Semester
DISCIPLINE SPECIFIC ELECTIVE – 3
BOTANY
Course Code: BOD 6.11
(Research Methodology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Define scientific research. Explain the difference between conceptual and empirical research using relevant examples. 2+12=14
2. What is a literature review? What are the objectives of a literature review? Write a comparative account between field research and laboratory research. 2+4+8=14

UNIT-II

3. Define SDS and write its importance. What is a secondary container and how should it be labelled? Mention four important guidelines while working in a laboratory. 4+6+4=14
4. Differentiate between simple dilution and serial dilution. Describe the process and purpose of serial dilution. Write some precautions for handling micropipette. 4+7+3=14

UNIT-III

5. Describe the different types of graphs used to illustrate research findings. State the importance of using graphs to present data. 10+4=14
6. What is “fixation” in tissue preparation? Describe the various methods used to study plant cells and tissue structure. 4+10=14

UNIT-IV

7. Describe the different types of classification of biological stains. Explain the various staining procedures. 7+7=14
8. Give a brief account on characteristics and working mechanism of reactive dyes. 14

UNIT-V

9. What are the different types of scientific writing? Explain the structure of primary research article. 4+10=14
10. Briefly describe falsification, fabrication, and plagiarism. Why is research ethics important? 10+4=14
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