

2023
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. Explain the process of literature review and its consolidation. Why is literature review important in research work? 10+4=14

UNIT-II

3. What is serial dilution? Describe the process of serial dilution. What is the purpose of conducting serial dilution? 2+9+3=14
4. Define molality. Calculate the molarity and normality of 98% sulfuric acid (H_2SO_4) solution. Determine the required volume of 98% sulfuric acid to prepare 200 ml of 0.2 M solution. Given, density of $\text{H}_2\text{SO}_4 = 1.84 \text{ g/ml}$; atomic mass (g/mol) of S = 32.065, O = 15.9994, H = 1.00794. 2+12=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. Describe the methods to study plant cell and tissue structure. 14

UNIT-IV

7. Give an account on classification of stains. What are the purposes of staining? 10+4=14
8. Explain the general features and nature of reactive dyes. Describe the principle steps of reactive dyeing. 7+7=14

UNIT-V

9. Explain the components of scientific poster presentation. What are the advantages of poster presentation over oral presentation? 10+4=14
 10. What are the different types of scientific writing? Explain the structure of primary research article. 4+10=14
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