

2024
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. What is a literature review? What are the objectives of a literature review? Write a comparative account between research method and research methodology. 2+4+8=14
2. Explain the difference between applied research and fundamental research using relevant examples. 14

UNIT-II

3. Briefly explain the hazard pictogram of globally harmonized system with diagram. State the important safety measures while handling toxic chemicals. 9+5=14
4. Define molarity and normality. Calculate the required volume of 50.5% sodium hydroxide (NaOH) solution to prepare 300 ml of 0.2 M solution. Given, density of NaOH = 1.53 g/ml; atomic mass (g/mole) of Na = 22.99, O = 15.9994, H = 1.00794. 4+10=14

UNIT-III

5. What is tabulation? Describe the parts of a table. State some importance of using graphs to present data. 2+6+6=14

6. Differentiate between physical and chemical fixation in tissue preparation. Describe the methods of tissue dehydration using graded solvent series.

7+7=14

UNIT-IV

7. What are fluorochromes? Describe the different classes of fluorescent tags and their applications. 2+12=14
8. Explain the steps in squashed plant techniques to study stages of cell division. State the importance of applying cytogenetic techniques in plant sciences. 12+2=14

UNIT-V

9. Write a note on academic misconduct and ethics in scientific writing. 14
10. What is referencing in scientific writing? Why is it important? What is the difference between a citation and an in-text citation? How should the reference citation entry for a journal article in the references page be written in APA style? 2+2+3+7=14
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