

**PHBOT1**

**Ph.D Course Work Examinations, July-2023**

**BOTANY**

**Course-I: Research Methodology**

**Time: 3 Hours**

**Max. Marks: 70**

**Instructions: All sections are compulsory**

**SECTION – A**

**I. Write a short note on any FIVE of the following** **5 X 5 = 25**

1. Topic selection.
2. Histochemistry.
3. Clustal Omega.
4. PAGE.
5. Teminism.
6. HPLC.
7. Microtome

**SECTION – B**

**II. Answer any THREE of the following** **3 X 10 =30**

8. Describe the various components of the research proposal.
9. Explain the principles, types, and applications of spectroscopy.
10. Give a brief account on the method and importance of radio labelling technique.
11. Discuss the enzymes used in molecular cloning.
12. Write a short note on biological databases in Bioinformatics.

**SECTION – C**

**III. Write an essay on any ONE of the following** **1 X 15 =15**

13. Explain the principle and applications of polymerase chain reaction.
14. Give a detailed note on phylogenetic tree construction.

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