

**TMP161050A**

**Reg. No: .....**

**Name: .....**

**M. Phil. DEGREE EXAMINATION, MARCH 2017  
SEMESTER I - BOTANY  
BO1C3MP - ADVANCES IN PLANT SCIENCE**

**Time: Three Hours**

**Maximum Marks: 75**

**PART A**

**I. Answer any nine questions. Each question carries 5 marks.**

1. Write an account on molecular pharming.
2. Explain primary structural databases citing examples.
3. Give an account on protein annotation with examples.
4. Describe the role of ionomics in predicting metabolic pathways.
5. Describe cDNA libraries and its significance DNA sequence analysis.
6. Explain QSAR.
7. Give an account on protein information resources with examples.
8. Write a note on multiple sequence alignment and its implications.
9. Give an account on bioreactors and its applications.
10. Describe the role of biotechnology in production of eco-friendly agricultural chemicals.
11. What is the importance of Nanotechnology in biosciences?
12. Explain EST and its applications.

**(9x5 = 45)**

**PART B**

**II. Answer any two questions. Each question carries 15 marks.**

13. Explain in detail the steps involved in developing a pure culture of microbe.
14. Discuss the role of biotechnology in waste water treatment.
15. Describe Proteomics. Write in detail the methodology followed for protein structure prediction and its implications.
16. Explain rDNA technology for production of microbial products.

**(2x15 =30)**