

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2021
(Regular/Improvement/Supplementary)**

**BOTANY
FBOT3C09 - BIOTECHNOLOGY AND BIOINFORMATICS**

Time: Three Hours

Maximum Weightage: 30

Part A: All questions can be answered. Each carries *two* weightage (Ceiling 6 weightage).

1. Comment on meristem culture.
2. What is Multiple Sequence Alignment?
3. Give a note on phytopolymers.
4. Differentiate between linkers and adaptors.
5. Comment on PubMed Central.
6. What is 'Rasmol'?
7. Define Northern Blotting.

Part B: All questions can be answered. Each carries *four* weightage (Ceiling 12 weightage).

8. Describe the methods of somatic hybridisation.
9. Mention the importance of Endosperm and Anther culture?
10. Write a note on PCR and its applications.
11. Describe different methods of DNA sequencing.
12. Comment on free software movement.
13. What are substitution matrices? Give its importance in bioinformatics.
14. Write a note on secondary and tertiary protein structure prediction softwares.

Part C: All questions can be answered. Each carries *six* weightage (Ceiling 12 weightage).

15. Write an essay on aseptic techniques and culture media used in plant tissue culture laboratory.
16. Give an account on biological databases and its importance.
17. Describe the direct and vector mediated gene transfer methods in genetic engineering.
18. Write an essay on applications of Bioinformatics.