

(i) Printed Pages: 2

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(ii) Questions : 9

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Exam. Code : 

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B.A./B.Sc. (General) 1<sup>st</sup> Semester

(2122)

**BIO-TECHNOLOGY**

Paper—BIOT-Elect-Sem.-I-T Introduction to Biotechnology

Time Allowed : Three Hours]

[Maximum Marks : 67

Note :— Attempt five questions in all. Attempt two questions each from Section A and Section B. Section C is compulsory.

**SECTION—A**

1. (a) Discuss how Biotechnology has improved agricultural practices. 7
- (b) Discuss important events in the advent of modern day Biotechnology. 6
2. (a) Give an outline of Good Laboratory practices. 6
- (b) Discuss different Biosafety levels in a Biotechnology lab. 7
3. (a) Discuss the role of *Arabidopsis thaliana* as a model organism for plants. 7
- (b) Discuss the structural features of a prokaryotic cell. 6



4. (a) Discuss the role of restriction endonucleases in DNA modification. 7

- (b) Discuss how viruses are useful in Biotechnological research. 6

### SECTION—B

5. Discuss the principle and types of centrifugation with applications in Biological research. 13

6. (a) Discuss principle and working of phase contrast microscope. 8

- (b) Discuss the basis of gel permeation chromatography. 5

7. Discuss different parts of computer alongwith their functions. 13

8. (a) Discuss different statistical data types. 7

- (b) Discuss Baye's theorem and its applications. 6

### SECTION—C

9. (a) Define Biotechnology. 2

- (b) What is Biosafety ? 2

- (c) What is a Cosmid ? 2

- (d) What is principle of sonication ? 3

- (e) What is principle of TLC ? 3

- (f) What is Probability ? 3