(For candidates admitted from 2016–2017 onwards)

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Part III — Biotechnology — Major

BIOSTATISTICS AND BIOSAFETY

Time: Three hours

Maximum: 75 marks

PART A —  $(10 \times 2 = 20)$ 

Answer ALL questions.

- 1. Methods of collection of Data
- 2. Statistical error
- 3. Mean
- 4. Skewness
- 5. Null hypothesis
- 6. Analysis of Variance
- 7. Horizontal LF
- 8. Biosafety

- 9. LMOs
- 10. RCGM.

PART B —  $(5 \times 5 = 25)$ 

Answer ALL questions, choosing either (a) or (b).

11. (a) Discuss the types of data collection methods.

Or

- (b) Give a short account on statistical error.
- 12. (a) Comment on absolute measures of Dispersion.

Or

- (b) Explain types of Correlation.
- 13. (a) Discuss the various types of hypothesis.

Or

- (b) Outline various tests to analyze statistical significance.
- 14. (a) Write about biological safety cabinets.

Or

(b) Discuss the biosafety issues in biotechnology.

15. (a) Comment on management strategies of GMOs release to environment.

Or

(b) Discuss about the International Agreements including Cartagena Protocol.

PART C —  $(3 \times 10 = 30)$ 

Answer any THREE questions.

- 16. Give a detailed account on essentials, design and methods of sampling.
- 17. Explain in detail about regression and its equations.
- 18. Discuss Analysis of Variance and types. And its importance and applications.
- 19. Elaborate the recommended biosafety levels for Infectious agents and infected animals.
- 20. Write a detailed essay on the operation of International and National biosafety guidelines.