

2055

B.A./B.Sc. (General) Sixth Semester

Industrial Microbiology (Elective)

IMB-601: Biostatistics, Tools and Techniques

Time allowed: 3 Hours

Max. Marks: 33

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

I. Answer briefly:-

- a) Tubular fermenter
- b) Gel electrophoresis
- c) Chi-square test
- d) Membrane filter
- e) DOS

(5×1)

UNIT - I

- II. a) Differentiate between exponential and logarithmic functions.
- b) Write a note on analysis of variance transformation.

(4,3)

- III. a) Explain the Binomial and Poisson distribution.
- b) Discuss mean, mode and median.

(5,2)

UNIT - II

- IV. a) Elaborate on the principle and applications of fluorescence microscopy.
- b) Discuss the application of affinity chromatography.

(5,2)

- V. a) Differentiate between paper and their layer chromatography.
- b) Write a note on Immuno-electrophoresis.

(4,3)

UNIT - III

- VI. Discuss the basic principle, functioning and usage of fermenter.
- VII. a) Elaborate on the process of cell sorting using flow cytometer.
- b) Describe the functioning of swing bucket rotor.

(7)

(5,2)

UNIT - IV

- VIII. a) Differentiate between computer hardware and software with examples.
- b) Explain the working of a solid state fermenter.

(4,3)

IX. Write notes on:-

- a) LOTUS
- b) Harward graphics

(7)

x-x-x