

1059

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

Industrial Microbiology

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) Mean
- b) Chi-square statistics
- c) Application of TLC
- d) Use of Membrane filters
- e) Flow cytometer
- f) Table top centrifuge
- g) Immunoelectrophoresis
- h) Condenser
- i) Resolving power

(9x1)

UNIT - I

II. Write a note on the basic idea of probability and distribution patterns.

(6)

III. a) Discuss the analysis of Variance transformation.

b) Explain the exponential and logarithmic functions.

(3,3)

UNIT - II

IV. Explain the working and applications of a Fluorescent Microscope.

(6)

V. Write notes on:-

- a) Affinity Chromatography
- b) Isoelectric focusing

(3,3)

UNIT - III

VI. Discuss the principle and applications of PCR.

(6)

VII. a) Write the significance of distillation unit in Microbiology Laboratory.

b) Draw a well labeled ray diagram for an Electron Microscope.

(3,3)

P.T.O.

(2)

UNIT – IV

- VIII. What are the principle operating characteristics of fermenters? Write about the computer control of fermentation process. (6)
- IX. a) Write short notes on:-
- i) LOTUS
 - ii) DOS (4)
- b) List two factors involved in fermenter design. (2)

x-x-x