

2072

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) Variance Transformation
- c) Paper Chromatography
- d) Membrane filters
- e) Flow cytometer
- f) Ultracentrifuge
- g) Immunoelectrophoresis
- h) Gel electrophoresis
- i) Numerical Aperture

(9x1)

UNIT - I

- II. Write a note on the normal binomial and Poisson distribution. (6)
- III. a) Discuss the chi-square statistics.
b) Differentiate between the exponential and logarithmic functions. (2x3)

UNIT - II

- IV. Explain the working and applications of Phase contrast microscope. (6)
- V. Write notes on:-
 - a) Thin layer chromatography
 - b) Gel filtration(2x3)

UNIT - III

- VI. Discuss the basic principle and functioning of Fermenters. (6)
- VII. a) What are the water purification systems used in a laboratory.
b) Discuss the principle and application of Centrifuge. (2x3)

P.T.O.

(2)

UNIT - IV

- VIII. a) What is the difference between batch fermenter and continuous stirred tank fermenter?
b) Discuss the principal operating characteristics of fermenters. (2x3)
- IX. a) Write short notes on computer application in fermentation technology.
b) Explain Harward Graphics. (4,2)

x-x-x