

M.Sc. Semester-II (CBCS Scheme) Examination

MICROBIOLOGY

(Biostatistics, Bioinformatics and Computer Applications)

Paper-V

Time : Three Hours]

[Maximum Marks : 80

Note :— All questions are compulsory and carry equal marks.

1. Calculate standard deviation for the following data which shows yield per hectare in various fields.

Yield per Hectare	No. of fields
31-35	2
36-40	3
41-45	8
46-50	12
51-55	16
56-60	5
61-65	2
66-70	2

16

OR

- (a) What are measures of central tendency and give their relative merits and demerits. 8
- (b) Explain in detail range, standard error and mean deviation as measures of dispersion. 8
2. Comment of suitability of ratio 3:1 for a cross between tall (TT) and dwarf (tt) where 1574 tall and 554 dwarf were obtained. 16

OR

- (a) Weights of 5 fishes were found as 2, 5, 3, 4, 1 kg. Find standard error of mean. 8
- (b) Explain with formula, merits and demerits about standard error of mean and standard error of standard deviation. 8

3. Explain in detail various input and output devices of computer. 16

OR

Explain in detail microbiological applications of computer. Comment on browsers and search engines. 16

4. What is biological database ? Explain in detail structure database and proteome database. 16

OR

Comment on role of bioinformatics in drug designing. Add notes on sequence analysis. 16

5. How is protein structure predicted using bioinformatics ? 16

OR

(a) Write in detail about Biocorba and Biopython. 8

(b) Comment on Blosun matrices and PAM matrix. 8