

Roll No.....

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Second Semester Online Examination, May-June, 2022

M. Sc. MICROBIOLOGY

Paper IV

BIOSTATISTICS AND COMPUTER APPLICATION

Time : Three Hours]

[Maximum Marks : 80

Note : Part A and B of each question in each unit consist of 'very short answer type question' which are to be answered in one or two sentences. Part C 'Short answer type' and D 'Long answer type' of each question should be answered within the word limit mentioned.

UNIT-I

1. (A) What are the basic concepts and importance of Biostatistics ? **2**
- (B) Differentiate population and samples with suitable example. **2**
- (C) What do you mean by data ? Describe its types and state objectives of data classification. (word limit 200-250) **4**

OR

What is pie chart in statistics ? Explain with suitable example.

P.T.O.

- (D) Explain frequency distribution its types and applications in Bio-statistics.

(word limit 400-450) **12**

OR

Find the Mean, Median and Mode from the following data:

36, 32, 41, 36, 40, 42, 41, 36, 32, 36, 41, 33, 37, 29, 36, 34, 36, 35, 36, 32.

UNIT-II

2. (A) What do you mean by range ? Give formula for coefficient of Range. **2**
- (B) What do you mean by correlation ? Give formula for correlation coefficient. **2**
- (C) Explain Basic concept of Probability.

(word limit 200-250) **4**

OR

Give difference between correlation and Regression.

- (D) Find the value of standard deviation and error from the following data and state results.

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9, 2, 5, 4, 12, 7, 8, 11, 9, 3, 7, 4, 12, 5, 4,
10, 9, 6, 9, 4. (word limit 400-450) **12**

OR

Find the value of correlation coefficient from the following table and state results.

Marks obtained in Internal assessment test of 10 students are as follows :

Student	Marks in Paper I	Marks in Paper II
A	18	17
B	12	14
C	13	14
D	10	8
E	15	15
F	17	14
G	12	11
H	16	17
I	18	17
J	19	20

Find is there a connection between the marks gained by 10 students in two papers.

UNIT-III

3. (A) State any two application of Chi square test. **2**

[3]

P.T.O.

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- (B) Define statistical quality control and state its advantages. **2**
- (C) Explain properties and application of standard t test. (word limit 200-250) **4**

OR

Explain significance of F test in Biostatistics.

- (D) What is Anova ? Describe procedure for single and multiple comparisons with suitable example. (word limit 400-450) **12**

OR

Explain the basic concepts, principle, types and significance of experimental design.

UNIT-IV

4. (A) What is MS Office and its features ? **2**
- (B) Write about application of MS Word. **2**
- (C) What is MS word ? Explain its file formats and file name extensions.

(word limit 200-250) **4**

OR

What is MS Excel ? Explain its features in brief.

[4]

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- (D) Write an article on internet and its applications in detail with suitable examples. *(word limit 400-450)* **12**

OR

What do you mean by search engines ?
Make a note on different types of search engines designed to carry out web searches.

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