

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

SEM4020

M.Sc. (IVth Semester) Examination, 2021

MICROBIOLOGY

Paper - MBEO-402 (A)

(Biostatistics)

Time : 1½ Hours]

[Maximum Marks : 40

Note :- This question paper contains three Sections.

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all the *ten* questions carry 1 mark each. The answer should not exceed 50 words.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer *five* questions by selecting at least *one* question from each Unit. Each question carries 3 marks. Answer should not exceed 200 words.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer *three* questions by selecting *one* question from each Unit. Each question carries 5 marks. The answer should not exceed 500 words.

Section-A

1. Explain the following terms :

- (i) Standard Deviation
- (ii) Ogive

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- (iii) Discrete variables
- (iv) Calculation of classmark
- (v) Pie diagram
- (vi) Null Hypothesis
- (vii) Secondary Data
- (viii) Variance
- (ix) Relation among Mean, Mode and Median
- (x) Attributes

Section-B

Unit-I

2. Discuss the applications of Biostatistics.
3. Discuss about qualitative and quantitative data.
4. Describe the different methods of the collection of primary data.

Unit-II

5. Find the Median from the following data :

Marks	0-10	10-30	30-50	50-80	80-90	90-100
No. of Students	4	12	20	8	4	2

6. Find the Mode from the following data :

Class	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	12	18	27	20	17	6

7. Draw the Pie diagram from the following data :

S. No.	Item	Expenditure
1	Food	4600
2	Clothing	700
3	Rent	1300
4	Fuel & Light	900
5	Education	1500
6	Miscellaneous	1000

Unit-III

8. What is curvilinear regression ? Discuss its applications.
9. Write a note on Cole's measure of association.
10. Explain the simple linear regression.

Section-C

Unit-I

11. What is Sampling ? Discuss the different methods of sampling.
12. Discuss the bar diagram and histograms.

Unit-II

13. Write a detailed account on Chi-square Test.
14. Describe Poisson distribution.

Unit-III

15. Discuss the statistical analysis of LD_{50} .
16. Discuss the statistical application in biological science.