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Second Semester B.Sc. Degree Examination, May/June 2019

(CBCS – Freshers)

Biotechnology

Paper II – GENERAL MICROBIOLOGY AND BIOSTATISTICS

Time : 3 Hours] *[Max. Marks : 70*

Instructions to Candidates :

1) *Part-I and Part-II must be answered in separate booklets.*
2) *Draw neat labeled diagrams wherever necessary.*

PART – I

(General Microbiology)

SECTION - A

I. Answer the following : **(4 × 2 = 8)**

1. Antiseptic
2. Food microbiology
3. Endoscope
4. Mesophiles

SECTION - B

II. Answer any **TWO** of the following : **(2 × 6 = 12)**

5. Describe the contributions of Joseph Lister in the field of Microbiology.
6. Discuss the principle involved in dark field microscopy.
7. Write a note on differential staining.

SECTION - C

III. Answer any **TWO** of the following : **(2 × 10 = 20)**

8. Give a detailed account of classification of fungi.

9. What is typhoid fever? Explain in detail.

10. Explain citric acid cycle.

11. What are Bacteriophages? Explain the structure of Lambda phage.

SECTION - D

IV. Answer the following : **(5 × 1 = 5)**

12. What are Carotenoids?

13. ———————— causes cholera.

14. Expand PPLO.

15. What are antibiotics?

16. Define Virology.

PART - II

(Biostatistics)

(To be answered in separate booklet)

I. Answer any **FOUR** of the following. **(4 × 5 = 20)**

1. Represent the following data by means of Histogram :

Number of grains per spice	Number of plants
0-10	8
10-20	12
20-30	22
30-40	35
40-50	40
50-60	60
60-70	52
70-80	40
80-90	30
90-100	5

2. Find the value of Mode from the following data :

Value	6	8	10	12	14	16	18	20	22	24
Frequency	20	30	40	40	55	60	55	20	15	25

3. Calculate coefficient of variation for the following data :

C-I	f
10-20	3
20-30	8
30-40	12
40-50	6
50-60	2

4. A person is known to hit the target in 4 out of 5 shots where as another person is known to hit the target in 3 out of 4 shots. Find the probability of the target being hit at all when they both try.

5. What is binomial distribution? Mention its applications.

6. Mention the applications of probability and distribution.

II. Answer the following : **(5 × 1 = 5)**

7. Define standard deviation.

8. What is Chi square test?

9. Define null hypothesis.

10. What is ANOVA?

11. What is Poisson distribution?