

Q.P. Code : 11234

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

(CBCS Scheme)

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 the same booklet.*
- 2. Draw neat labelled diagrams wherever necessary.*

PART - I

(GENERAL MICROBIOLOGY)

SECTION - A

- I. Write short notes on the following : (5 × 2 = 10)**
 - Thermophile
 - Mordant
 - Joseph Lister
 - Heterocyst
 - Capsule

SECTION - B

- II. Answer any **TWO** of the following : (2 × 5 = 10)**
 - Explain the construction and working principle of fluorescence microscope.
 - Give an account of bacterial classification based on flagella.
 - Write a note on photophosphorylation.

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SECTION - C

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

9. Explain ED pathway.
10. Describe the general features, structure and classification of viruses.
11. Explain filtration as a method of sterilization.
12. Describe the salient features and reproduction in algae.

SECTION - D

IV. Answer the following in a word or sentence : **(5 × 1 = 5)**

13. Give an example for photosynthetic bacteria.
14. Name the causal organism for TB.
15. Expand HEPA.
16. What are cocci in chains called?
17. What is a prophage?

PART - II

(BIOSTATISTICS)

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

1. Calculate the median for the following data :

No. of fish in a pond :	10-20	20-30	30-40	40-50	50-60
No. of ponds :	8	12	25	20	06

2. Represent the following data in a histogram.

No. of eggs :	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of hens :	16	20	13	15	6	2	1

3. Write a note on variance and state its significance.

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4. List the merits and demerits of standard deviation.
 5. A basket contains 10 red, 5 yellow and 20 green balls, Two balls are picked at random. Find the probability that both are green.
 6. Write the characteristics of Poisson distribution.
- II. Answer the following : **(5 × 1 = 5)**
7. Define Null hypothesis.
 8. What is a pie-chart?
 9. Define Data.
 10. Mention the types of mean.
 11. What is statistical probability?
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