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)**

1. Thermophile
2. Mordant
3. Joseph Lister
4. Heterocyst
5. Capsule

SECTION – B

II. Answer any **TWO** of the following : **(2 × 5 = 10)**

6. Explain the construction and working principle of fluorescence microscope.
7. Give an account of bacterial classification based on flagella.
8. Write a note on photophosphorylation.

SECTION – C

(2 × 10 = 20)

III. Answer any **TWO** of the following :

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

(5 × 1 = 5)

IV. Answer the following in a word or sentence :

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)

(4 × 5 = 20)

I. Answer any **FOUR** of the following :

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.

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?
