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Reg. No. ☐☐☐☐☐☐☐

II Semester B.Sc. Degree Examination, September- 2021
BIOTECHNOLOGY
General Microbiology & Biostatistics
(CBCS Scheme)
Paper : II

Time : 3 Hours **Maximum Marks : 70**

Instructions to the 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. Robert Koch.
2. UV rays.
3. Capsular Staining.
4. Bacterial Flagella.
5. Endospore.

SECTION - B

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

6. Describe the contribution of Louis Pasteur in the field of Microbiology.
7. Explain the construction and working principle of TEM.
8. Write a note on physical methods of sterilization.

SECTION - C

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

9. Draw a neat labelled diagram and explain the structure of bacterial cell.
10. Explain Classification and reproduction of Mycoplasma.
11. Give an account on AIDS.
12. Explain Kreb's cycle.

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SECTION - D

IV. Answer the following **in a Word or Sentence.** (5×1=5)

13. What is Resolving power of microscope?

14. Expand AFB.

15. Name any one stain used in Positive Staining.

16. Give an example for photoautotrophs.

17. What are the components of cell wall of Gram negative bacteria.

PART - II

(BIOSTATISTICS)

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

1. The data recorded on the number of chlorophyl deficient plants in a Lentil population are given below. Calculate the Arithmetic mean

No. of chlorophyll deficient plants	No. of plants
0	34
1	14
2	20
3	24
4	25
5	33

2. Calculate the mean deviation and its coefficient from the following data

   variable $(x) - 30, 40, 70, 20, 60, 50, 10$.

3. Calculate the standard deviation from the following data

   variable $(x) - 10, 13, 17, 22, 27, 30, 31, 32$.

4. In F_2 generation Mendel obtained 621 tall plants and 187 dwarf plants out of the total of 808. Test whether these two types of plants are in accordance with the Mendelian monohybrid ratio of 3:1 or that they deviate from this ratio.

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5. A card is drawn from a well shuffled pack of cards. What is the probability that the card is a spade or a queen?

6. What is the probability of getting 0, 1, 2, 3, and 4 heads when a coin is tossed 4 times.

II. Answer the following.   (5×1=5)

7. What is Arithmetic mean?

8. Define Frequency.

9. Write the different measures of Central tendency.

10. What is Statistical probability?

11. Name the Mathematician who derived Binomial distribution.