

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Sixth Semester

Microbiology

BIOSTATISTICS

(For those who joined in July 2020 only)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Who is regarded as the father of biostatistics?
(a) Fischer (b) Karl Pearson
(c) Francis Galton (d) Francis Bacon
2. Flower colour is a
(a) quantitative variables
(b) qualitative variables
(c) absolute variables
(d) continuous variables

7. In a positively skewed distribution mean > median
(a) mode (b) geometric mean
(c) harmonic mean (d) range
8. The value of median from the following data is
1100, 1150 1080 1120 1200, 1160 1400.
(a) 1100 (b) 1150
(c) 1400 (d) 1340
9. The standard deviation measures the absolute _____ of dispersion.
(a) dispersion (b) average
(c) skewness (d) kurtosis
10. The coefficient of correlation is said to be a measure _____ between two series,
(a) Covariance (b) Mean,
(c) Variance (d) Standard deviation.

3. Year wise production of rice, wheat and maize for the last ten years can be displayed by _____.

- (a) Simple column chart
- (b) Subdivided column chart
- (c) Broken bar diagram
- (d) Multiple column chart

4. When there are a large number of values in an individual series, preference for portraying the data goes to _____.

- (a) bar diagram (b) column chart
- (c) line chart (d) scatter diagram

5. The sum of absolute deviations about median is

- (a) the least (b) the greatest
- (c) zero (d) equal

6. When the value of $r = +1$, the correlation is

- (a) negative (b) positive
- (c) perfect positive (d) perfect negative

PART B — (5 × 5 = 25 marks)

Answer ALL questions by choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Give brief history of biostatistics.
Or
(b) What is the difference between descriptive and inferential biostatistics?
12. (a) Describe the merits and demerits of random sampling.
Or
(b) Write a note on frequency curves.
13. (a) Differentiate - Simple frequency from relative frequency.
Or
(b) Write about the Merits and demerits of Arithmetic mean.
14. (a) Define coefficient of variation and explain its uses.
Or
(b) How to calculate the standard deviation for raw and grouped data?

15. (a) What is a scatter diagram? Mention its uses.

Or

(b) State the properties of regression coefficient.

PART C — (5 × 8 = 40 marks)

Answer ALL questions by choosing either (a) or (b).
Each answer should not exceed 600 words.

16. (a) What are parametric and nonparametric tests or methods?

Or

(b) Differentiate between:

- (i) Population and sample
- (ii) Qualitative and quantitative variables
- (iii) Descriptive and inferential statistics
- (iv) Accuracy and precision

17. (a) Explain about the types of Bar Diagrams.

Or

(b) Describe different sampling methods used in biostatistics.

18. (a) Write the details about the merit and demerits of Median.

Or

(b) Explain how to calculate median and mode for grouped data.

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19. (a) What is chi-square test? Give the importance of it.

Or

(b) What is regression analysis? Explain the properties of regression line.

20. (a) Give an account on applications of ANOVA.

Or

(b) Explain the method how to calculate the Karl pearsons correlation coefficient?

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