

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch - BIOCHEMISTRY

BIOSTATISTICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. A graph that uses vertical bars to represent data is called a _____.
(i) Line graph (ii) Bar graph
(iii) Scatterplot (iv) Vertical graph
2. The measures of central tendency which can't be found graphically is
(i) Mean (ii) Mode
(iii) Median (iv) None of these
3. The relationship between two or more than two variables is called _____.
(i) Relation (ii) Standard Deviation
(iii) Correlation (iv) All of these
4. In a Binomial Distribution, if 'n' is the number of trials and 'p' is the probability of success, then the mean value is given by _____.
(i) np (ii) n
(iii) p (iv) np(1-p)
5. A statement made about a population for testing purpose is called?
(i) Statistic (ii) Hypothesis
(iii) Level of significance (iv) Test-statistic

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Analyze the primary data and the methods for collecting the primary data.
OR
b. Discuss the steps in conducting scientific research.
7. a. Define: Standard deviation.
OR
b. Explain the measures of dispersion and its types.
8. a. Determine the scatter diagram and its types.
OR
b. Justify the term Regression analysis.
9. a. Evaluate the Random Variable in Statistics.
OR
b. Define: Poisson distribution.
10. a. Explain the hypothesis and its types.
OR
b. Discuss the standard error.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a Categorize the various sources of Primary data.

OR

b Evaluate the graphs of frequency distribution and Classify its types.

12 a From the following data, find out the mean.

Marks (x)	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No.of students (f)	10	18	20	26	30	28	18

OR

b The following data are the height of the 10 students. Calculate Standard deviation.
60, 60, 61, 62, 63, 63, 63, 64, 64, 70

13 a Following are the ranks obtained by 10 students in two subjects, Biostatistics and Biochemistry. Compute the rank correlation.

Biostatistics	7	2	1	10	8	4	9	6	3	5
Biochemistry	9	1	2	10	7	6	5	8	4	3

OR

b Classify the types of regression analysis.

14 a Find the probability of drawing an Ace; a King and a Queen from a pack of cards in 3 consecutive draws without replacement of cards drawn.

OR

b Enumerate the importance of normal distribution.

15 a A sample of 1600 leaves has a mean length of 5.4" could it be reasonably regarded as a sample from a population of leaves whose mean is 5.25" and standard deviation is 2.6". Find out the level of significance.

OR

b In a random samples of 10 persons selected from a population their heights noted to be

Heights in inches	63	63	66	67	68	69	70	71	72	73
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Discuss the suggestion that the mean height of the population is 66". Find the degrees of freedom and level of significance.

Z-Z-Z

END