



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – STATISTICS

FIRST SEMESTER – NOVEMBER 2022

UST 1501 – STATISTICAL METHODS

(19 & 20 BATCH)

Date: 24-11-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION - A

Answer ALL the Questions

10 × 2 = 20

1. Distinguish between Primary data and Secondary data.
2. Mention the requisites of a standard table.
3. Define Co-efficient of variation.
4. Express the fourth central moment in terms of raw moments.
5. Sketch the graph for positive skewness, negative skewness and symmetric distribution.
6. Briefly explain Scatter diagram.
7. What do you mean by curve fitting?
8. Distinguish between correlation and association.
9. State the properties of regression coefficients.
10. How can the frequencies for various attributes be displayed in a 2x2 contingency table?

SECTION – B

Answer Any FIVE from the following

5 × 8 = 40

11. Discuss in detail the scope of Statistics.
12. What are the advantages of sampling over census method of collecting data?
13. Explain the difference between exclusive and inclusive class intervals.
14. Explain the advantages of graphical representation of statistical data.
15. Explain the various measures of dispersion and their merits.
16. Find Quartile Deviation for the following distribution of wages of employees in a factory.

Wages (Rs.'000):	0 -10	20-10	20-30	30-40	40-50	50-60	60-70
No.of Employees:	5	8	10	6	4	5	7

17. For the following data, Calculate the co-efficient of Rank Correlation.

X	80	91	99	71	61	81	70	59
Y	123	135	154	110	105	134	121	109

18. 1800 candidates appeared for an examination, 450 were successful, 340 had attended a coaching class and out of these 200 came out successful. Estimate Co-efficient of Association.

SECTION – C

Answer any TWO from the following

2 × 20 = 40

19. a) What is the need for diagrammatic representation of data? Explain the construction of one-dimensional diagrams.

b) What do you mean by tabulation of data? State the objectives of tabulation.

20. a) Following are the marks obtained by two students A and B in 10 sets of examination.

Sets	1	2	3	4	5	6	7	8	9	10
A's mark	44	80	76	48	52	72	68	56	60	64
B's mark	48	75	54	60	63	69	72	51	57	56

If the consistency of performance is the criterion for awarding the prize, who should get the prize?

b) Explain principle of least squares.

21. a) Compute Karl Pearson's co-efficient of Skewness for the following distribution.

Wages (in Rs.):	10-20	20-40	40-70	70-90	90-100
No. of Workers:	5	15	30	8	2

b) Describe the various measures of skewness to describe statistical data.

22. Potato chip lovers do not like soggy chips, so it is important to find characteristics of the production process that produce chips with an appealing texture. The following sample data on frying time (in seconds) and moisture content (%) were selected.

Frying time	65	50	35	30	20	15	10	5
Moisture content	1.4	1.9	3.0	3.4	4.2	8.1	9.7	16.3

Predict the moisture content of the chips if the frying time is 40 seconds.

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