(6 pages) Reg. No. : .....

Code No. : 30396 E **Sub. Code : AMEC 12**

B.A. (CBCS) DEGREE EXAMINATION, APRIL 2023.

First Semester

Economics – Core

STATISTICAL METHODS – I

(For those who joined in July 2020 only)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

1. Bowley says, Statistics may rightly be called as the science of ————

(a) Standard Deviation

(b) Median

(c) Mode

(d) Averages

2. Statistical methods are extremely helpful in formulating and testing hypothesis and to develop ————

(a) New Model (b) New Theories

(c) New Diagrams (d) New Data

3. ———— facilitates comparison.

(a) Tabulation (b) Classification

(c) Diagrams (d) Graphs

4. A ———— diagrams is used to represent only one variable.

(a) Percentage Bar (b) Sub-divided Bar

(c) Simple Bar (d) Multiple Bar

5. An average is otherwise called as ————

(a) Arithmetic Mean (b) Median

(c) Mode (d) Geometric Mean

6. Mode refers to the value which within a series that occurs ———— number of times.

(a) Maximum (b) Minimum

(c) Zero (d) Infinite

7. Choose the correct formula for Range.

(a) M-S (b) L-S

(c) H-S (d) L-S

8. Choose the correct formula for Quartile Deviation.

(a) $Q1 = \frac{N^{th}}{4}\ item$ (b) $Q3 = \frac{3N^{th}}{4}\ item$

(c) $Q.D = \frac{Q3 - Q1}{2}$ (d) $D_9 = 9N/10^{th}\ item$

9. The spread of the frequencies is the same on both sides of the centre point of the curve is called _____

(a) Symmetrical (b) Asymmetrical

(c) Positively Skewed (d) Negatively Skewed

10. If $\beta_2 = 3$, it is

(a) Mesokurtic (b) Platy kurtic

(c) Lepto kurtic (d) Skewness

PART B — (5 × 5 = 25 marks)

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

11. (a) What are the functions of Statistics?

Or

(b) Briefly explain the limitations of Statistics.

12. (a) Bring out the types of classification.

Or

(b) Highlight the general rules for constructing diagrams.

13. (a) What are the qualities of a good average?

Or

(b) Compute median from the following data.

Mid-value	115	125	135	145	155	165	175	185	195
Frequency	6	25	48	72	116	60	38	22	3

14. (a) Write a short summary on the measures of dispersion.

Or

(b) The annual salaries of a group of employees are given in the following table.

Salaries (in Rs.000)	45	50	55	60	65	70	75	80
Number of Persons	3	5	8	7	9	7	4	7

Calculate the standard deviation of the salaries.

15. (a) Compute the co-efficient of skewness based on the following data.

X	4.5	14.5	24.5	34.5	44.5	54.5	64.5	74.5	84.5	94.5
Y	1	5	12	22	17	9	4	3	1	1

Or

(b) What is Kurtosis? Write the measures of Kurtosis.

PART C — (5 × 8 = 40 marks)

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

16. (a) Describe the Applications of Statistics.

Or

(b) Explain the various methods of primary data collection.

17. (a) Describe the parts of a table.

Or

(b) Examine the different types of Diagrams.

18. (a) Explain the merits and limitations of Median.

Or

(b) Calculate mode for the following data

Marks	20-30	30-40	40-50	50-60
No. of Students	3	8	14	20
Marks	60-70	70-80	80-90	
No. of. Students	8	5	2	

19. (a) Compute quartile deviation and the coefficient of quartile deviation from the following data.

Wages in Rs. Per Day	Less than 35	35-37	38-40	41-43	over 43
No. of Wage Earners	14	62	99	18	7

Or

(b) Goals scored by two teams in a Football match were as follows.

No. of Goals scored		0	1	2	3	4	5	Total
No.of Football Matches Played	Team 'A'	15	10	07	05	03	02	42
	Team 'B'	20	10	05	04	02	01	42

Calculate co-efficient of variation and state which team is more consistent.

20. (a) Using moments, calculate kurtosis for the following distribution.

Or

(b) Define skewness and explain the measures of skewness.
