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Reg. No. :

Code No. : 10386 E Sub. Code : AMEC 12

B.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

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.

Choose the correct answer.

1. All statistics are numerical statement of facts that is expressed in _____.
(a) concepts (b) theories
(c) numbers (d) verbal
2. Statistical methods provide helpful means of _____ future events.
(a) Assessment (b) Calculation
(c) Forecasting (d) Measurements

3. Arrangement of data according to time is called _____.
(a) alphabetical (b) chronological
(c) geographical (d) conventional
4. Bar diagrams are the most common type of diagrams used in practice. They are called _____ diagrams.
(a) one dimensional
(b) two-dimensional
(c) three dimensional
(d) pictograms
5. Find the mode from the given values : 3, 5, 8, 5, 4, 5, 9, 3
(a) 3 (b) 4
(c) 5 (d) 9
6. To calculate the median all the items of a series have to be arranged in _____ order.
(a) a descending
(b) an ascending
(c) an ascending or a descending
(d) none of the above

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Briefly explain the methods of secondary data collection.

Or

- (b) Write short summary on the scope of statistics.

12. (a) Explain the significance of graphs for times series data.

Or

- (b) Bring out the meaning and objectives of classification.

13. (a) Calculate arithmetic mean for the data given below.

Marks	10	20	30	40	50	60
No. of students	8	23	45	65	75	80

Or

- (b) Explain the merits of mode.

7. Algebraic signs are ignored while calculating _____ deviation.

- (a) Quartile (b) Mean
(c) Standard (d) Range

8. _____ deviation is most prominently used in further statistical works.

- (a) Quartile (b) Inter-quartile
(c) Standard (d) Range

9. Absolute measures of skewness _____.

- (a) \bar{X} - Mode
(b) Mean - Mode/Standard deviation
(c) $Q_3 + Q_1 - 2$ Median
(d) Mode - \bar{X}

10. Kurtosis (β_2) =

- (a) $\frac{\mu_4}{\mu_2^2}$ (b) μ_4
(c) $\frac{\mu_4}{\mu_3}$ (d) $\frac{\mu_2}{\mu_4}$

14. (a) Briefly explain the merits and limitation of standard deviation.

Or

- (b) Find out the value of quartile deviation and its coefficient from the following data :

Roll No. :	1	2	3	4	5	6	7
Marks	20	28	40	12	30	15	50

15. (a) State the four types of moments.

Or

- (b) From the data given below calculate the coefficient of variation :

Karl Pearson's coefficient of skewness = 0.42,
Arithmetic mean = 86, Median = 80.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the functions of Statistics.

Or

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

17. (a) Discuss the various types of classification.

Or

- (b) Bring out the rules of constructing Diagrams.

18. (a) Explain the merits and limitations of Arithmetic mean.

Or

- (b) From the following data calculate the missing value when mean is 115.86.

Wages (Rs.):	110	112	113	117	(X)	125	128	130
No. of Workers	25	17	13	15	14	8	6	2

19. (a) Find the median and mean deviation of the following data :

Size:	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	7	12	18	25	16	14	8

Or

- (b) Find the standard deviation from the following data :

x :	10	20	30	40	50	60	70	80
f :	15	30	53	75	100	110	115	125

20. (a) Explain the measures of skewness.

Or

(b) Calculate Bowley's coefficient of skewness from the following data :

Class intervals :	0-5	5-10	10-15	15-20
Frequency :	7	10	20	13
Class intervals :	20-25	25-30	30-35	35-40
Frequency :	17	10	14	9
