

D 131135

(Pages : 5)

Name.....

Reg. No.....

**FIRST SEMESTER M.A. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2025**

(CBCSS)

Econometrics

ECM 1C 04—BASIC STATISTICS AND SAMPLING THEORY

(2020 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

**Part A (Multiple Choice Questions)***Answer all fifteen questions.**Each question carries 1/5 weightage.*

1. The method of collecting secondary data include :
  - (a) Direct personal interview.
  - (b) Collecting data from published sources.
  - (c) Collecting data from unpublished sources.
  - (d) Both (b) and (c) are correct.
2. The demerits of mailed questionnaire method include :
  - (a) Only literate informants can participate.
  - (b) There is uncertainty about the response.
  - (c) Information collected may not be correct.
  - (d) All the above.
3. Which among the following is not related with the theory of sampling ?
  - (a) Law of Statistical regularity.
  - (b) Law of large numbers.
  - (c) Method of moment.
  - (d) Probability distribution.

**Turn over**

4. Frequency polygon is :
- (a) A graph of frequency distribution.
  - (b) Particularly effective in comparing two or more frequency distribution.
  - (c) Not a graphical method.
  - (d) None of the above.
5. Quota sampling is a :
- (a) Census method.
  - (b) Probability sampling technique.
  - (c) Non probability sampling technique.
  - (d) All the above.
6. Which among the following relationship is true ?
- (a)  $\text{Mode} = \text{Mean} - 3 [\text{Mean} - \text{Median}]$ .
  - (b)  $\text{Mode} = 3 \text{ Median} + 2 \text{ Mean}$ .
  - (c)  $\text{Median} = \text{Mode} - \frac{2}{3} [\text{Mean} - \text{Mode}]$ .
  - (d) All the above.
7. Mode is the :
- (a) Most frequently occurring value in a series of observation.
  - (b) The middle value in a distribution.
  - (c) Both (a) and (b) are correct.
  - (d) None of the above.
8. Which among the following is a property of a good measure of variation ?
- (a) It should be rigidly defined.
  - (b) It should have sampling stability.
  - (c) It should be easy to compute.
  - (d) All the above.

9. If the value of ' $r$ ' is less than the probable error :
- (a) The co-efficient of correlation is significant.
  - (b) The co-efficient of correlation is not significant.
  - (c) The value of ' $r$ ' is significant.
  - (d) Both (a) and (c) are correct.
10. In any distribution when the original items differ in size, the value of A.M., G.M., and H.M. would also differ and will be like :
- (a)  $AM = GM = HM$ .
  - (b)  $A.M. \geq G.M. \geq H.M.$
  - (c)  $G.M. \geq A.M. \geq H.M.$
  - (d)  $H.M. \geq G.M. \geq A.M.$
11. Which among the following is not a cause of bias in sampling ?
- (a) Deliberate selection of a representative sample.
  - (b) Substitution.
  - (c) Non response.
  - (d) None of the above.
12. Measure of skewness tells us :
- (a) The direction and extent of asymmetry in a series.
  - (b) The variation in a series
  - (c) Both (a) and (b) are correct.
  - (d) None of the above.
13. The third moment about mean measures :
- (a) Mean.
  - (b) Variance.
  - (c) Skewness.
  - (d) Kurtosis.
14. Types of correlation does not include :
- (a) Positive or negative correlation.
  - (b) Simple, partial and multiple correlation.
  - (c) Linear and non-linear correlation.
  - (d) Rank correlation.

**Turn over**

15. Standard error indicates :

- (a) Measures the dispersion about an average line, called regression line.
- (b) Measures the dispersion about an average such as the mean.
- (c) Both (a) and (b) are correct.
- (d) None of the above.

(15 × 1/5 = 3 weightage)

**Part B (Very Short Answer Questions)**

*Answer any **five** questions out of eight questions.*

*Each question carries 1 weightage.*

- 16. Define Median.
- 17. What is Sampling ?
- 18. Define exogeneous variable.
- 19. What is interval scale variable ?
- 20. Define standard error.
- 21. Define linear function.
- 22. Define Range.
- 23. What is Skewness ?

(5 × 1 = 5 weightage)

**Part C (Short Answer Questions)**

*Answer any **seven** questions out of ten questions.*

*Each question carries 2 weightage.*

- 24. Explain the law of statistical regularity.
- 25. Briefly discuss the merits and limitations of sampling.
- 26. Describe the types of tables.
- 27. What do you mean by Ogives ? Explain.
- 28. Distinguish between simple regression and multiple regression.
- 29. Briefly discuss the significance of measuring variations.

30. Discuss the merits of Arithmetic mean.
31. Briefly discuss the properties of correlation.
32. A survey was conducted to study the relationship between expenditure on accommodation (X) and expenditure on food and entertainment (Y) and the following results were obtained :

	Mean	S.D
Expenditure on accommodation	Rs. 1,730	630.5
Expenditure on food and entertainment	Rs. 488	236.2
Co-efficient of correlation	0.67	

Write down the regression equation and estimate the expenditure of food and entertainment, if the expenditure on accommodation is Rs. 1,200.

33. Briefly discuss the measures of dispersion.

(7 × 2 = 14 weightage)

#### Part D (Essay Questions)

Answer any **two** questions out of four questions.

Each question carries 4 weightage.

34. Elaborate the different ways of graphical representation of frequency distribution.
35. Discuss the difference in correlation and regression analysis.
36. Briefly explain the merits and demerits of standard deviation.
37. Illustrate the advantages and disadvantages of non-probability techniques.

(2 × 4 = 8 weightage)