D 13219 **(Pages : 3)** **Name.....**

Reg. No.....

FIRST SEMESTER B.A. DEGREE EXAMINATION, NOVEMBER 2021

(CBCSS—UG)

Econometrics and Data Management Programme

STA 1(2) C01—STATISTICAL METHODS FOR ECONOMICS—I

(2021 Admissions)

Time : Two Hours and a Half Maximum : 80 Marks

Section A (Short Answer Type Questions)

Answer at least **ten** *questions.*
Each question carries 3 *marks.*
All questions can be attended.
Overall Ceiling 30.

1. What are the limitations of Statistics ?
2. Distinguish between questionnaire and schedule.
3. Define sample. What are the limitations of sampling ?
4. Explain the merits of simple random sampling.
5. Calculate mean from the following data :

Value		5	15	25	35	45	55	65	75
Frequency	:	15	20	25	24	12	31	71	52

6. Mean marks obtained by 100 students was found to be 40. Later on it was noted that one value was read as 83 instead of 53. Find out the correct mean.
7. Calculate the median for the following data :

Size	5	8	10	15	20	25
Frequency	3	12	8	7	5	4

8. What are the merits of mode ?
9. What are the purpose of measuring variation ?
10. Define correlation. Which are the different kinds of correlation ?
11. Calculate Karl Pearson's correlation coefficient between X and Y from the following data :

$n = 10, \sum X = 35, \sum X^2 = 203, \sum Y = 28, \sum Y^2 = 140, \sum XY = 168.$

12. What are the uses of index numbers ?

Turn over

13. What are the characteristics of Fisher's index number ?

14. Distinguish between splicing and base shifting.

15. What do you mean by a Pareto chart in Excel ?

(10 × 3 = 30 marks)

Section B (Short Essay Questions)

Answer at least **five** *questions.*
Each question carries 6 *marks.*
All questions can be attended.
Overall Ceiling 30.

16. Explain the important statistical tools commonly used in economic analysis.

17. What do you mean by primary data ? Explain various methods for collecting primary data.

18. Find mode from the following data :

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of Students :	3	10	15	20	12	7	3

19. Find the mean deviation about mean for the following frequency distribution of marks of 60 college students :

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency :	4	6	10	20	10	6	4

20. *Explain Lorenz curve.*

21. A computer while calculating correlation co-efficient between two variables X and Y from 25 pairs of observations obtained the following results, $n = 25$, $\sum X = 125$, $\sum X^2 = 650$, $\sum Y = 100$, $\sum Y^2 = 460$, $\sum XY = 508$. It was however discovered, at the time of checking that two pairs observations were not correctly copied. They were taken as (6, 14) and (8, 6) while the correct values were (8, 12) and (6, 8). Find the correct value of the correlation co-efficient.

22. Calculate simple index number by average relative method :

Items	Price in base year	Price in current year
1	5	7
2	10	12
3	15	25
4	20	18
5	8	9

23. What is filter and sorting in Excel ? How will you sort a data in Excel ?

(5 × 6 = 30 marks)

Section C (Long Essay Questions)

Answer any **two** *questions.*
Each question carries 10 *marks.*

24. Explain the scope and importance of Statistics.

25. The scores of two batsmen A and B in eight innings during a certain match are as follows :

Batsman A	10	12	80	70	60	100	0	4
Batsman B :	8	9	7	10	5	9	10	8

Examine which of the two batsmen is more consistent in scoring.

26. Ten competitors in a beauty contest are ranked by three judges in the following order :

First Judge	1	6	5	10	3	2	4	9	7	8
Second Judge	3	5	8	4	7	10	2	1	6	9
Third Judge	6	4	9	8	1	2	3	10	5	7

Use the correlation co-efficient to discuss which pair of judges have nearest approach to common tastes in beauty.

27. Calculate Laspeyre's, Paasche's and Fisher's index numbers for the following data and examine whether they satisfy the time reversal test :

Commodity	1992		2002	
	Price	Quantity	Price	Quantity
A	10	4	12	5
B	8	3	10	4
C	4	8	5	7
D	12	2	12	3
E	6	9	7	8

(2 × 10 = 20 marks)