

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2025**

(CBCSS - UG)

**CC19USTA1C01 - INTRODUCTORY STATISTICS**

(Statistics - Complementary Course)

(2019 to 2023 Admissions - Supplementary)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 3

**Part A (Short answer questions)**Answer ***all*** questions. Each question carries 2 marks.

1. What are the components of Statistics Wing of Ministry of Statistics and Programme Implementation?
2. Write any four responsibilities of NSSO.
3. Define Secondary data. State its major sources.
4. Define qualitative data. Give an example.
5. Define quartile deviation.
6. Calculate Standard deviation of 42, 48, 50, 62, 65.
7. What is Box plot?
8. What is a scatter diagram?
9. What are the merits and demerits of rank correlation coefficient.
10. How does analysis of time series help business forecasting?
11. Give the names of different methods of measuring trend.
12. What are quantity index numbers?

**(Ceiling: 20 Marks)****Part B (Short essay questions - Paragraph)**Answer ***all*** questions. Each question carries 5 marks.

13. Explain the terms skewness and kurtosis. How are they measured?
14. The equations of two regressions lines are  $9x - 4y + 15 = 0$  and  $25x - 6y - 7 = 0$ . Identify the regression lines.
15. Fit a parabola of the form  $y = ax^2 + bx + c$  to the following data.

x	1	2	3	4	5	6	7	8	9
y	2	6	7	8	10	11	11	10	9

16. Fit a curve of the form  $y = ax^b$  to the following data.

x	1	2	3	4	5
y	5	6.3	7.2	7.9	8.5

17. Compute the trend values by finding four-yearly moving averages for the following time series. Also graph observed values and trend values.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Value	103	104	107	101	102	104	105	99	100

18. Which are the methods used for measuring seasonal variations?

19. Compute a price index for the following by a (a) Simple aggregate and (b) Average of price relative method by using both arithmetic mean and geometric mean.

Commodity	A	B	C	D	E	F
Price in 2002(Rs.)	20	30	10	25	40	50
Price in 2007(Rs.)	25	30	15	35	45	55

**(Ceiling: 30 Marks)**

**Part C (Essay questions)**

Answer any **one** question. The question carries 10 marks.

20. Calculate Mean, Median and Mode:

Class Interval	170-180	180-190	190-200	200-210	210-220	220-230	230-240	240-250
Frequency	52	68	85	92	100	95	70	28

21. From the following data construct a price index number of the group of four commodities by using the appropriate formula:

Commodity	Base year		Current year	
	Price per unit	Expenditure (Rs.)	Price per unit	Expenditure (Rs.)
A	2	40	5	75
B	4	16	8	40
C	1	10	2	24
D	5	25	10	60

**(1 × 10 = 10 Marks)**

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