

THREE YEAR BCAS (CBCS) DEGREE EXAMINATION, APRIL 2017

SECOND SEMESTER

STATISTICAL METHODS AND THEIR APPLICATIONS

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any FIVE of the following questions.

(Marks : 5×5 marks = 25 marks)

1. Calculate Arithmetic Mean to the following data.

X	4	6	8	10	12	14	16
Y	6	9	13	24	13	9	7

2. Calculate Median to the following data.

6, 7, 9, 2, 3, 11, 9, 2, 19, 1, 11, 2, 15, 18, 4, 18, 18

3. Find Range and its coefficient of the following data.

Pocket expenditure (Rs.):	22	24	38	41	18	20
No. of. Students:	2	3	7	5	10	3

4. From the following data compute Mean deviation and its coefficient.

X	2	3	4	5	6	7	8	9	10
Y	6	4	3	2	5	3	5	6	4

5. Calculate the coefficient of variation of the following data.

13, 14, 0, 8, 3, 13, 5, 11, 9, 5.

6. Calculate standard deviation to the following data.

8, 9, 5, 3, 5, 7, 11, 8, 10, 11.

7. Find the coefficient of skewness from the following data.

Difference of two quartiles = 8, Sum of two quartiles = 22, Median = 10.5.

8. Given that Mean = 45.2 S.D = 19.59 Mode = 43.2 find Karl-Pearsons coefficient of skewness.

9. We are given
- $N = 15$
- $\sum X = 25$
- $\sum Y = 18$
- $\sum (X - \bar{X})^2 = \sum X^2 = 136$
- $\sum (Y - \bar{Y})^2 = \sum Y^2 = 138$
- and
- $\sum xy = 122$
- . Then find correlation coefficient.

10. In the data given below ranks are given, find rank correlation coefficient.

R _x :	8	9	6	10	7	5	3	4	1	2
R _y :	8	9	5	4	10	6	3	2	1	7

SECTION - B

Answer any FIVE of the following questions.

(Marks : 5 × 10 marks = 50 marks)

11. Define measures of Central tendency. State its merits and demerits.

12. Calculate Median from the following data.

Age	45-55	55-60	60-65	70-75	80-85	90-95	100-105	105-110
No. of. persons	7	13	15	20	30	33	28	14

13. Calculate Quartile deviation and its coefficient to the following data.

Weight in (Kgs.)	59	60	62	63	65	72	74	78
No. of workers	1	3	5	7	10	3	1	1

14. Define Mean deviation and state its merits and demerits.

15. Indicate which BRAND you will choose and why

	Mean	Standard deviation
Brand X	14000	2000
Brand Y	18000	4000

16. Define Measures of dispersion briefly and state its merits and demerits.

17. Define (a) Karl-pearson's coefficient skewness. (b) Bowley's coefficient of skewness.

18. Calculate Karl-pearson's Coefficient of Skewness to the following data.

Value	1	2	3	4	5	6	7
Frequency	1	5	12	22	17	9	4

19. Define Correlation. Define Karl-pearson's coefficient of correlation and Spearman's correlation coefficient.

20. Find the rank correlation to the following data.

A:	75	79	45	57	97	75	49	57	96	99	100
B:	49	57	86	49	79	57	47	56	78	85	105