Date: 24-04-2017   Dept. No.   Max. : 100 Marks
Time: 01:00-04:00

Section A
Answer ALL the questions (10x2=20 Marks)

1. Give any two scope of statistics.

2. What is table?

3. Define frequency polygon.

4. draw a pie diagram to represent the following population in a town.

Males	Females	Girls	Boys	Total
2000	1800	4200	2000	10000

5. Define median.

6. What is range?

7. Define positive correlation.

8. Define regression.

9. Give any two advantages of time series.

10. Define skewness.

Section B

Answer any FOUR Questions (4x10=40 Marks)

11. Briefly explain the methods of collection of primary data.

12. from the following data find out mode by using empirical method.

Class interval	3-4	4-5	5-6	6-7	7-8	8-9	9-10
Frequency	83	27	25	50	75	38	18

13. from the following data, calculate quartile deviation and its coefficient.

1490	962	777	335	582	488	753	384	407	672	522

14. Calculate the combined arithmetic mean of the following data

	Class A	Class B
No. of Students	150	250
Average Marks	72	73

15. A sample of 12 fathers and their eldest son gaves the following data about their height in inches: Find their rank correlation coefficient.

Father	65	63	67	64	68	62	70	66	68	67	69	71
son	68	66	68	65	69	66	68	65	71	67	68	70

16. The production cement by affirm in years 1to 9 is given below:

Year	1	2	3	4	5	6	7	8	9
Production	4	5	5	6	7	8	9	8	10

Calculate the trend values for above series by following two methods.
1. 3- yearly moving average
2. Least square method.

17. find the karl pearson's coefecient of the following data and interpret its value.

X	105	111	104	112	118	98	116	123	116	112
Y	62	64	53	60	72	56	68	60	69	65

Section C

Answer any TWO Questions(2x20=40 Marks)

18. Following are the marks obtained by two students A and B in 10 sets of examination.

Sets	1	2	3	4	5	6	7	8	9	10
Marks of A	32	28	47	63	71	39	10	60	96	14
Marks of B	19	31	48	53	67	90	10	62	40	80

If the consistency of performance is the criterion for awarding the prize, who should get the prize?

19. calculate Bowley's co efficient of skewness for the following data.

Profits(Rs in lakhs)	Less than 10	20	30	40	50	60	70
No. of companies	8	20	40	50	56	59	60

20. The following information about advertisement and sales

	Adv. Expenses (X) (Rs. In lakhs)	Sales (Y) (Rs in lakhs)
Mean	10	90
S.D	3	12

Correlation co effecient -0.8 .
1. obtain the two regression lines.
2. Find the likely sales when advertisement expenditure is Rs. 15 lakh.
3. What should be advertisement expenditure if the company wants to attain sales target of Rs. 120 lakhs.

21. The number of students belonging of two sections A and B according to the marks obtained by them is given in the following table. Draw their Lorenz curves in the same graph and interpret them.

Marks	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Sec A	10	6	4	12	8	6	4
Sec B	5	9	5	11	7	8	5

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