



Date: 25-11-2024

Dept. No.

Max. : 100 Marks

Time: 01:00 pm-04:00 pm

SECTION A

Answer ANY FOUR of the following

4 x 10 = 40 Marks

1. Explain the importance and scope of Statistics.
2. Compute quartile deviation and coefficient of quartile deviation from the following data:

Marks	10	20	30	40	50	60
No. of students	4	7	15	8	7	2

3. Draw a pie chart to represent the following cost data of Beta Ltd.

Particulars	Rs. (in thousands)
Raw Material	500
Labour	306
Overheads	194

4. Explain the difference between correlation and regression.
5. Calculate mean, median and mode for the given continuous data:

X	0-20	20-40	40-60	60-80	80-100
f:	3	17	27	20	9

6. From the following data, obtain the two regression equations:

X	6	2	10	4	8
Y	9	11	5	8	7

7. Compute 4-yearly moving average values for the following data:

Years	Value	Years	Value
1997	24	2003	78
1998	28	2004	94
1999	34	2005	112
2000	42	2006	132

2001	52	2007	154
2002	64	2008	178

8. Explain the various methods of constructing the index numbers.

SECTION B

Answer ANY THREE of the following

3 x 20 = 60 Marks

9. Draw a histogram and frequency curve for the following data.

Age (in years)	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of persons	5	12	19	21	18	10	4

10. From the following data, calculate the price index number by

- (a). Laspeyres method (b). Paasche's method (c). Bowley's method
(d). Fisher's Ideal formula (d). Marshall-Edge worth's method.

Commodity	2012		2013	
	Price (Rs.)	Quantity (in kg)	Price (Rs.)	Quantity (in kg)
A	20	8	40	6
B	50	10	60	5
C	40	15	50	10
D	20	20	20	50

11. Calculate Bowley's coefficient of skewness for the following data:

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	5	8	7	12	28	20	10	10

12. The following data refer to the production of cloth in million yards during 2002-12. Compute the five yearly moving averages.

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Production	50	36	43	45	38	38	33	42	44	34	38

13. From the following data, construct an index for 2014 taking 2013 as base by the average of relatives method using (a) Arithmetic mean and (b) Geometric mean for averaging relatives.

Commodities:	A	B	C	D	E
Price in 2013 (Rs.)	50	40	80	110	20
Price in 2014 (Rs.)	70	60	90	120	20

14. Calculate the correlation coefficient and rank correlation for the following data:

Advertisement: (Cost Rs.000)	39	65	62	90	8	75	25	98	36	78
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Sales: (Rs. in lakhs)	47	53	58	86	6 2	68	60	91	51	84

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