

Q. M. - I

Seat No:- _____

Duration:- 2½hrs

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Marks:- 75

- Note:- A) All the questions are compulsory.
 B) Each question carries equal marks.
 C) Graph paper will be provided on demand.

[Q:1] (A) SELECT A PROPER ANSWER FROM GIVEN MULTIPLE CHOICE QUESTION. (ANY 8) 8M

- 1) If 15,17,18,16,14 are given find the mean. (16,14,17) (CO1,R)
- 2) $\frac{R}{4} = L - S$. (Range, Quartile, Mean) (CO1,R)
- 3) Correlation cannot be more than _____. (0,1,2) (CO1,R)
- 4) _____ means regression of x depends on y. (bxy, byx, xyb) (CO1,R)
- 5) The amount paid by insured for insurance policy is known as _____. (Bonus, Premium, EMI)(CO2,R)
- 6) The base years index number is always _____. (100, 150, 200) (CO1 ,R)
- 7) If P is 0.4, then q will be _____. (0.3, 0.6, 0.7) (CO1 ,R)
- 8) In _____ criteria we take maximum value of outcomes. (EMV,EOL,Minimin) (CO2 ,R)
- 9) _____ divides the data in 2 parts. (Mean, Mode, Median) (CO1 ,R)
- 10) The correlation between Demand and price of goods is _____. (Positive, Zero, Negative) (CO1 ,R)

[Q:1] (B) STATE WHEATER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE. (ANY 7) 7 M

- 1) Median Divides the data in 4 parts. (CO1 ,R)
- 2) The square root of variance is Standard deviation. (CO 1,R)
- 3) Karl Pearson has given correlation formula. (CO 1,R)
- 4) r is the root of bxy and byx. (CO 1,R)
- 5) Premium of policy depends upon age and sum assured. (CO 2,R)
- 6) Fisher index numbers is root of product of Lespeyers and Paaches formula. (CO 2,R)
- 7) 2 cubes has 36 outcomes. (CO 2,R)
- 8) EMV stands for expected monetary value. (CO 2,R)
- 9) $Q_3 - Q_1$ is considered at inter quartile range. (CO 1,R)
- 10) Mode can be find by using Histogram. (CO 1,R)

[Q:2] SOLVE THE FOLLOWING

(8+7 = 15)

A) Find the mean of the following data. (CO1,R)

C. I.	0-20	20-40	40-60	60-80	80-100
F	5	6	8	7	4

B) Find the Median for the following data. (CO1,R)

C. I.	0-10	10-20	20-30	30-40	40-50
F	3	5	6	4	2

OR

C) Following data gives the marks of students in different subjects, find the best performer using Co-efficient of Range. (CO1,R)

A	50	60	80	70	90
B	60	65	66	68	70

D) Find the Standard Deviation for the following data. (CO1,R)

C. I.	0-20	20-40	40-60	60-80	80-100
F	5	6	8	7	4

F4B CB7
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[Q:3] SOLVE THE FOLLOWING

(8+7 = 15)

A) Find the Spearmen's Rank correlation for the following data. (CO1,R)

X	65	76	83	78	72	69	70	42
Y	90	87	65	54	43	67	81	70

B) Find the two regression if \bar{X} is 50, \bar{Y} is 70, S.D. of X is 7, S.D. of Y is 4, $r = 0.4$. also find (CO1,R)

OR

C) If Two dice are thrown at a time, find the probability of getting. (i) the sum of both is 10 (ii) first number is greater than second. (CO1,A)

D) Find the Best Course of Action using E.M.V. Criteria. (CO1,A)

State of Nature	Course of Action				Probability
	A1	A2	A3	A4	
S1	60	70	80	100	0.4
S2	80	50	60	70	0.3
S3	100	60	60	40	0.2
S4	70	90	50	50	0.1

[Q:4] SOLVE THE FOLLOWING

(8+7 = 15)

A) Find Lespeyer, Paaches and Fishers index numbers. (CO 1,A)

Comordity	P0	Q0	P1	Q1
A	45	9	50	8
B	50	8	55	7
C	55	7	60	6
D	60	6	70	5

B) Find the cost of Index numbers for the following data. (CO1,A)

Commodity	I	W
A	120	30
B	123	30
C	126	20
D	128	20

OR

C) A person wants to buy an insurance policy of sum assured Rs. 500000, if the company charges Rs. 43 per thousand and gives Rs.2 Discount on Annul premium. Find the premium paid by him for annual policy.(CO1,R)

D) Find the Age of Mr. Dev as on today if his data of birth is 17-05-1984. (CO1,R)

[Q:5] SHORT NOTES (ANY 3)

(5+5+5 = 15)

- 1) Merits & Demerits of Mean (CO1,2 ,R)
- 2) Scattered Diagram (CO1,R)
- 3) Formulas of Regression (CO2,R)
- 4) What is standard deviation? (CO2 ,R)
- 5) Insurance and types of Insurance (CO1,R)
