

9. The correlation coefficient is:
- a. The square of the coefficient of determination
 - b. Can never be negative
 - c. The square root of the coefficient of determination
 - d. Same as r-square
10. Choose the correct example for positive correlation:
- a. Weight and Income
 - b. Price and Demand
 - c. Payment and EMI
 - d. Income and Expenditure

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(Descriptive)

Time : 1 Hr. 15 Mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. State the difference between Correlation and Regression. 5
2. Define Karl Pearson's Correlation coefficient. Find the correlation coefficient between advertising expenses and sales value using Karl Pearson's method 10

firm	1	2	3	4	5	6	7	8	9	10
Adv. Expn	11	13	14	16	16	15	15	14	13	13
Sales	50	50	55	60	65	65	65	60	60	50

3. Describe the elements of probability. Two dice are rolled. Find the probability that the sum is equal to 1, equal to 4 and less than 13. If a random variable X takes the value 1,2,3 with probability $P(X=r)=r/6; r=1,2,3$.
Find
i) $E(x)$,
ii) $var(x)$,
iii) $Var(2x+3)$ 10

4. The Following table gives the demand and price for a commodity for 6 days- 10

Price	4	3	6	9	12	10
Demand	46	65	50	30	15	25

Obtain the value of co-efficient of determination and compute the standard error of estimate.

5. What is hypothesis? State and describe the various types of hypothesis. 10
What are two types of error? Describe Goodness of fit test.

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