

(4)

Q.XIII Write short notes on —

- (a) χ^2 – distribution
- (b) t – distribution
- (c) F – distribution

Total No. of Questions : 13

Total No. of Printed Pages : 4

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M.B.A. (Ist Sem.) (P.T.) Examination-2011

QUANTITATIVE TECHNIQUES

Paper - P-103

Time Allowed : Three Hours

Maximum Marks : 70

Note : There are two sections. Attempt any four questions from section A and any three from section B.

Section-A

Note : Attempt any four questions. Each question carries 7 marks.

L.Q.I Distinguish between classification and tabulation.
Discuss the purpose and methods of classification.

L.Q.II What do you mean by 'Central tendency' ? Describe the advantages and disadvantages of mean and mode.

(2)

Q.III Explain how the standard deviation, quartile deviation and mean deviation. Discuss the circumstances in which they may be used.

Q.IV What do you understand by moments ? Discuss various types of moments and their interrelations.

Q.V Prove that the coefficient of correlation lies between -1 and +1.

Q.VI Define binomial distribution. State the conditions under which binomial probability model is appropriate.

Q.VII Explain the concept of significance in test of hypothesis. Describe briefly the procedure of testing a hypothesis.

Q.VIII Write a short note on the control charts for attributes.

Section-B

Note: Attempt any three questions.

All questions carries 14 equal marks.

Q.IX The sum of 50 observations is 500 and sum of their squares is 6000 and median is 12. Compute the coefficient of variation and coefficient of skewness.

(3)

Q.X The data about the sales and advertisement expenditure of a firm is given below—

Sales (in crores of Rs.)	Advertisement Expenditure (in crores of Rs.)
Means	40
Standard deviation	10

$$\text{Coefficient of correlation} = r = 0.9$$

- (a) Estimate the likely sales for a proposed advertisement expenditure of Rs. 10 crores.
(b) What should be the advertisement expenditure if the firm proposes a sales target of 60 crores of rupees ?

Q.XI

A problem in statistics is given to two students A and B. The odds in favour of A solving problems are 6 to 9 and against B solving the problems are 12 to 10. If both A and B attempt, find the probability of the problem being solved.

Q.XII

Explain the concept of independence and mutually exclusiveness of two events A and B. If A and B are independent events then prove that \bar{A} and \bar{B} are also independent.