

**MASTER OF BUSINESS ADMINISTRATION
EVERONN (MBAEV)**

Term-End Examination

December, 2011

MCN-038 : QUANTITATIVE TECHNIQUES

Time : 3 hours

Maximum Marks : 100

Note : *Attempt any five questions.*

1. The following data relate to marketing expenditure is Rs. Lakh and the corresponding sales of a product in Rs. crores. Estimate the marketing expenditure to attain a sales target of Rs. 40 crores. 20

Marketing expenditure	10	12	15	20	23
Product Sales	14	17	23	21	25

2. (a) What is standard error of estimate ? How is it measured ? 10+10
- (b) Discuss the relationship between standard error of estimate and coefficient of correlation.
3. The average rainfall in cm during 2003-10 was recorded as under. Obtain (a) a trend rainfall data using the least square method, and (b) cyclical relatives in rainfall. 20

Year	2003	2004	2005	2006	2007	2008	2009	2010
Rainfall	11	13	15	10	14	17	15	20

4. Explain the circumstances when the following probability distributions are used : **10+10**
- (a) Binomial distribution
 - (b) Normal distribution
5. Explain the following : **10+10**
- (a) Type I error and type II error
 - (b) Distinguish between a statistic and a parameter.
6. Write note on the following : **10+10**
- (a) Chi-square as a test of 'goodness of fit'
 - (b) Conditions for applying Chi-square test
7. State the general procedure for testing the hypothesis. Explain Null hypothesis in detail. **20**
8. "Transportation model is a special case of linear programming". Discuss. **20**
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