



MBA.T.1/10. 175

**M.B.A. (TRAVEL AND TOURISM) DEGREE I SEMESTER EXAMINATION,
NOVEMBER 2010**

SMT 2104 QUANTITATIVE TECHNIQUES AND OPERATIONS MANAGEMENT

Time: 3 Hours

Maximum Marks: 50

(5 x 10 = 50)

- I. A. Briefly examine the relative merits and demerits of the different measures of dispersion. Which of these measures can be considered appropriate for statistical analysis?
OR
B. What is a control chart? What are the different types of control charts for variables? Explain the logic of setting the control limits at $\pm 3\sigma$.

- II. A. Distinguish between short term forecasts and long term forecasts. What are the methods used for long term forecasting?
OR
B. The annual sales of a company are as follows:

<u>Year</u>	<u>Sales (in lakhs of rupees)</u>
2000	45
2001	56
2002	78
2003	46
2004	66
2005	75
2006	82

Obtain the trend values and estimate the sales for the year 2010.

- III. A. What is a decision tree? Distinguish between the type of nodes found in a decision tree. What are the basic rules for drawing a decision tree?

OR

- B. A chemical company is considering the possibility of expanding into agricultural chemicals. The company faces two alternatives: that of building a big plant or a small plant. Demand expectations for the plants products are 50 percent for high demand, 30 percent for medium demand and 20 percent for low demand. The big plant calls for an investment of Rs.10 crores while the investment for the small plant is Rs.4 crores. Net cash flows, all discounted to the present value will range from Rs.17.6 crores to Rs.7 crores and Rs.2.8 crores under different demand expectations, for the large plant and from Rs.5.2 crores to Rs.4.8 crores to Rs.2.8 crores in the case of a small plant. Construct a decision tree and provide a suitable decision.

(P.T.O)