

END TERM EXAMINATION

FIFTH SEMESTER [BBA] DECEMBER-2008

Paper Code: BBA 305 Subject: Production & Operations Management
Paper Id-17305 (Batch: 2004-2006)

Time : 3 Hours Maximum Marks :75

Note: Answer five questions in all, attempting at least 2 questions from each Section.

SECTION-A

- Q1. What are the requirements of a Production/Operations Manager in the current environment? How these can be tackled using specific strategies and management actions? (8+7)
- Q2. (a) 'Zero defects is not possible'. Do you agree? Justify your answer in either case. (8)
(b) Give the detailed break-up of Costs of Quality in the form of a chart only. (7)
- Q3. (a) Why is layout so important in managing production and operations? What are the symptoms of a bad layout? (8)
(b) What are the criteria for splitting tasks in an assembly line layout? (7)
- Q4. (a) Which forecasting model would be good for forecasting sales of a detergent brand of say, HUL (Hindustan Unilever Ltd.) and why? (8)
(b) What are some of the qualitative techniques used in forecasting? (7)
- Q5. Write notes on any three: (5x3=15)
 - (a) 'Poka-yokes'
 - (b) Bench marking
 - (c) Acceptance Sampling
 - (d) Analytic Delphi Method

SECTION-B

- Q6. The teller facility of State Bank of India at a College Extensive Counter has a one-man operation at present. Customers arrive at the bank at the rate of 1 every 4 minutes to use the teller. The service time varies randomly across customers on account of some parameters. However, based on the past, it has been found that the teller takes on an average 3 minutes to serve an arriving customer. The arrivals follow Poisson distribution and service times follow exponential distribution.
 - (a) What is the probability that there are at the most three customers in front of the teller? (5)
 - (b) What is the average number of customers in the waiting line? (5)
 - (c) What is the average number of customers in the system? (5)
- Q7. The annual demand for sheet metal components in an automobile company is 2500 boxes. The company procures the item from a supplier at the rate of Rs 750 per box. The company estimates the cost of carrying inventory is 18% per unit per annum and the cost of ordering is Rs. 1080 per order. The company works for 250 days in a year.
 - (a) 'How much' and 'when' these components should be ordered? (10)
 - (b) What is total variable cost of this plan? (5)
- Q8. In a footwear manufacturing company, a quality assurance executive takes five samples each with four observations of the length of time in minutes for an adhesive to dry. The data is recorded as follows:- (5x3=15)

Sample (Drying time in minutes)					
Observations	I	II	III	IV	V
Sub Group 1	12.11	12.15	12.09	12.12	12.09
Sub Group 2	12.10	12.12	12.09	12.10	12.14
Sub Group 3	12.11	12.10	12.11	12.08	12.13
Sub Group 4	12.08	12.11	12.15	12.10	12.12

- (a) Estimate control limits for 'mean' charts.
- (b) Estimate control limits for 'range' charts.
- (c) Show through plotting these values in graph whether the process appears to be control and the reasons thereof.

Choose the appropriate values from the given set of values.

[For $n = 4, A_2 = .729, D_3 = 0, D_4 = 2.28$
For $n = 5, A_2 = .577, D_3 = 0, D_4 = 2.11$]
