

**B.Tech. Degree VIII Semester Examination in
Computer Science and Engineering
November 2002**

CS 802 INDUSTRIAL MANAGEMENT

(1998 Admissions)

Time: 3 Hours

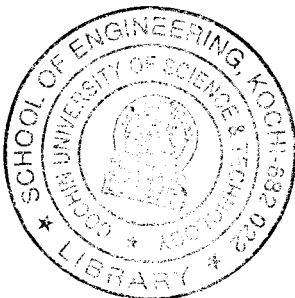
Maximum Marks: 100

- I (a) List various techniques used for solving a Decision problem under certainty. (8)
- (b) What is "DECISION TREE"? Briefly describe advantages of Decision Tree. (12)

OR

- II (a) Write objectives of Network Analysis. (10)
- (b) A small engineering project consists of nine activities. 3 time estimates for each activity given below. Calculate the expected time for each activity. Draw the network diagram and mark it on the diagram. Calculate the slack for each activity and find the critical path. (10)

Activity	Optimistic time in hrs.	Most likely time in hrs.	Pessimistic time in hrs.
1 - 2	2	5	14
1 - 6	2	5	8
2 - 3	5	11	29
2 - 4	1	4	7
3 - 5	5	11	17
4 - 5	2	5	14
6 - 7	3	9	27
5 - 8	2	2	8
7 - 8	7	13	31



(Turn over)

- III. (a) Explain Economic Order Quantity. What are the simplifying assumptions made in derivation of the EOQ formula? (10)
 (b) The annual demand for an item is 3200 units. The unit cost is Rs.6/- and inventory carrying charges 25% per annum. If cost of one procurement is Rs.150/-, determine Economic Order Quantity and Number of orders per year. (10)

OR

- IV. (a) Write steps to solve sequencing problem processing n-jobs through two machines. Explain the method to find total elapsed time, Idle time for 1st and 2nd machine. (12)
 (b) A book binder has one printing press, one binding machine and the manuscripts of a number of different books. The time required to perform the printing and binding operations for each book are shown below. He wish to determine the order in which books should be processed in order to minimize the total time required to turn out all the books. Also find the idle time for printing machine and binding machine. (8)

Books	1	2	3	4	5	6
Printing time (hrs.)	30	120	50	20	90	110
Binding time (hrs.)	80	100	90	60	30	10

- V. (a) What are the requirements of good product design?
 (i) Considering customer satisfaction.
 (ii) Considering adequate profit generation. (12)
 (b) Explain interchangeability and standardization. (8)

OR

- VI. (a) Describe any two forecasting techniques? }
 (b) What is TQM? Explain. } (20)

- VII. (a) Discuss various factors influencing plant location.
 (b) What is "Flow Pattern" in plant layout? Give example

OR

- VIII. (a) Explain advantages of preventive maintenance.
 (b) Why replacement is needed for an equipment? Explain about most appropriate time of replacement.

- IX. (a) Explain the relation between material handling and plant layout.
 (b) Briefly describe principles of material handling.

OR

- X. (a) Explain applications of Work study.
 (b) Write short notes on:
 (i) Work sampling
 (ii) PMTS
 (iii) Process charts (3)
