

2012
Bachelor of Commerce
Fifth Semester
BCM-504: Production and Operation Management

Time allowed: 3 Hours

Max. Marks: 80

NOTE: Attempt four short answer type questions from Section-A. Attempt two questions each from Section B and C respectively.

x-x-x

Section – AI. Attempt any four of the following:-

- a) Find the sequence that minimizes the total time required in performing the following jobs in three machines in the order ABC. Processing times (in hours) are given the following table:

| Job | 1 | 2 | 3 | 4 | 5 |
|-------------|---|----|---|---|----|
| Machine - A | 8 | 10 | 6 | 7 | 11 |
| Machine - B | 5 | 6 | 2 | 3 | 4 |
| Machine - C | 4 | 9 | 8 | 6 | 5 |

- b) Find out the EOQ from the following particulars:-

Monthly usage : 500 units

Cost of material P.U. : Rs. 20

Cost of placing and receiving order : Rs. 60

Annual carrying cost of one unit : 10% of inventory value

- c) Define the term crashing.

- d) What is work study?

- e) Explain the principles of Good facility Layout

- f) Explain in detail Just in Time Inventory System.

(4x5)

Section – B

II. A small maintenance project consists of the following 12 jobs:-

| Job | Duration in days |
|--------|------------------|
| 1 - 2 | 2 |
| 2 - 3 | 7 |
| 2 - 4 | 3 |
| 3 - 4 | 3 |
| 3 - 5 | 5 |
| 4 - 6 | 3 |
| 5 - 8 | 5 |
| 5 - 7 | 8 |
| 6 - 10 | 4 |
| 7 - 9 | 4 |
| 8 - 9 | 1 |
| 9 - 10 | 7 |

Determine the critical path and all the floats.

(15)
P.T.O.

- III. Differentiate between PERT and CPM. (15)
- IV. Discuss the various activities involved in the long range capacity planning decisions. (15)
- V. a) Discuss various aspects of product design.
b) Explain the nature of strategic planning. (2x7½)

Section – C

- VI. A publishing house purchase 2000 units of a particular item per year at a unit cost of Rs. 20, the ordering cost per order is Rs. 50 and the inventory carrying cost is 25 per cent. Find the optimal order quantity and minimum total cost including purchases cost. If a 3 per cent discount is offered by the supplier for purchase in lots of 1000 or more, should the publishing house accept the proposal ? (15)
- VII. What is work measurement? What are its objectives? Briefly explain various techniques of work measurement. (15)
- VIII. a) What is logistic management? Explain its principles.
b) Write a note on growth and challenges in supply chain management. (2x7½)
- IX. What is inventory control? Explain its importance. How to achieve inventory control. (15)