

(i) Printed Pages: 4

Roll No.

(ii) Questions : 14

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Exam. Code :

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Bachelor of Commerce 5th Semester
(2122)

PRODUCTION AND OPERATION MANAGEMENT

Paper : BCM-504

Time Allowed : Three Hours]

[Maximum Marks : 80

Note :— Attempt any **FOUR** questions from Section-A, each question carries 5 marks. Attempt **TWO** questions each from Section-B and Section-C respectively, each question carries 15 marks. Z-table shall be supplied in the examination centre if required.

SECTION—A

- I. Write five objectives of Production and Operation Management.
- II. Discuss the terms "Production Capacity", "Effective Capacity", "Maximum Capacity" and "Design Capacity".
- III. Write a note on Customer Relationship Management.
- IV. Differentiate between Logistics Management and Supply Chain Management.

V. Solve the following Sequencing problem for minimum total elapsed time :

Job No.	1	2	3	4	5	6	7
Machine A	20	90	80	20	120	15	65
Machine B	25	60	75	30	90	35	30

VI. From the details given below, calculate :

- (a) Re-Order Level
- (b) Minimum Level
- (c) Maximum Level
- (d) Danger Level

Normal Usage : 15 units per day

Maximum Usage: 20 units per day

Recorder Quantity : 200 units

Reorder period : Maximum 15 days, Minimum 6 days;
Average 10 days

Emergency purchases 4 days

Calculate for each component :

- (a) Re-Order Level
- (b) Minimum Level
- (c) Maximum Level
- (d) Average Stock Level.

SECTION—B

- VII. What do you mean by Production and Operations Management? Explain various functions of Production and Operations Management.
- VIII. Explain various qualitative methods of demand forecasting. Also explain the criterion to select suitable method.
- IX. Explain clearly the meaning, objects and techniques of Production Planning and Control.
- X. Consider the following project :

Activity	1-2	1-3	1-4	2-5	3-5	4-6	5-6
Optimistic Time	1	5	5	9	2	3	4
Most Likely time	4	5	10	12	4	6	4
Pessimistic time	7	5	15	21	6	9	4

- (i) Draw the network diagram and identify critical path.
- (ii) What is the probability of project completion within 19 days ?
- (iii) If the term of the contract includes a penalty clause specifying penalty of Rs. 4,000 per week the completion of the project extends beyond 21 days. What is the probability that the company will have to pay penalty of Rs. 16,000 ?

SECTION—C

- XI. What is work measurement ? Discuss various techniques of Work Measurement.
- XII. What is supply chain management ? Explain in detail the activities involved in the Supply Chain Management.

XIII. Explain the concept and different issues related to Logistics Management.

XIV. A Company purchases raw material from outside supplier for its annual requirement of 100000 units. The cost of placing each order is Rs. 160. Carrying costs are 20% per year. The product costs Rs. 20 each unit. Answer the following questions :

- (i) What is the optimal order size ?
- (ii) What is the total inventory cost ?
- (iii) How many orders will be placed in a year ?
- (iv) What is the time gap between two orders ?
- (v) If supplier offers a discount of 5% on orders of 10000 units or more, should the offer be accepted ?