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MWR–002

P. G. CERTIFICATE IN INVENTORY PLANNING AND WAREHOUSING SYSTEMS FOR ENGINEERS (PGCIPWS)

Term-End Examination

December, 2025

MWR-002 : ADVANCE INVENTORY PLANNING AND CONTROL

Time : 3 Hours *Maximum Marks : 70*

Note : *Attempt any* ***seven*** *questions. All questions carry equal marks. Use of scientific calculator is permitted.*

1. (a) Compare the conventional approach with the modern approach of materials management with the help of organizational structure. 7

(b) Does the separation of purchasing function from the material management function help in improving performance of organization ? 3

2. If you are a purchase manager in a manufacturing firm, what are the steps you would follow to purchase any item ? 10

3. Discuss the method/procedure for evaluating a vendor or supplier. 10

4. (a) What is aggregate planning ? What is the purpose of aggregate planning ? 5

(b) Describe aggregate planning options while dealing with managing demand. 5

5. A manufacturer has the following information on its major products : 10

Regular-time production capacity = 2600 units/period

Overtime production cost = ₹ 600/unit

Inventory cost = ₹ 100/unit/period (based on ending inventory)

Backlog cost = ₹ 500/unit/period

Beginning inventory = 400 units

Demand (in units) for periods 1, 2, 3 and 4 is 4000, 3200, 2000, and 2800 respectively. Develop a level output plan that yields zero inventory at the end of period 4.

What will be the cost resulting from this plan ?

6. Explain the MRP-I system. Discuss the logic and methodology used in MRP-I. 10

7. Illustrate product structure used in MRP-I using suitable diagram. 10

8. (a) What are the performance measures for supply chain ? Briefly discuss. 5

   (b) Describe the applications of supply chain in e-Commerce. 5

9. (a) What do you understand by JIT production system ? Why is it synonymous with lean system ? 5

   (b) Describe the limitations of JIT system in today's business scenario. 5

10. Write short notes on any *two* of the following : 5×2=10

    (a) Kanban

    (b) MUDA

    (c) 5 'S' techniques

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