No. of Printed Pages : 4 **MWR–002**

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

Term-End Examination

June, 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. "Integrated Materials Management (IMM) is concerned with management functions supporting the complete cycle of material flow." Discuss. 10

2. Discuss the purchasing cycle for any material or component using flowchart. 10

3. (a) What do you understand by 'dependent' and 'independent' demand ? Describe using suitable example. 5

   (b) What is the impact of the push-pull system in demand ? 5

4. (a) What do you understand by aggregate production and aggregate capacity planning ? 5

   (b) Describe the level production and chase demand strategies for aggregate planning. 5

5. (a) What do you understand by master production schedule ? How is it linked with MRP-I ? 5

   (b) Explain 'Bill of Materials' in MRP-I. 5

6. "JIT inventory management system is a means, not an end." Illustrate. 10

7. (a) What is the use of 'Kanban System' in any manufacturing firm ? 3

(b) Usage of a work center is 300 parts per day, and a standard container holds 25 parts. It takes an average of 0.12 day for a container to complete a circuit from the time a Kanban card is received until the container is returned empty. Compute the number of Kanban cards (containers) needed if maximum allowable inefficiency in the system is 0.20. 7

8. (a) Explain the inbound and outbound perspectives of supply chain management. 5

(b) Illustrate a simple supply chain model of any engineering/manufacturing firm. 5

9. (a) In today's era of environmental concern, green sourcing or procurement is being given due importance. How does it help in improving overall supply chain performance of a firm ? 5

(b) List comparative advantage of single sourcing over multisourcing. 5

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

(a) Kaizen

(b) Bull-whip effect

(c) ERP

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