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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

MBA (Integrated)

SEM: IV - THEORY EXAMINATION (2025 - 2026)

Subject: Production and Operations Management

Time: 2.5 Hours

Max. Marks: 60

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

15

1. Attempt all parts:-

- (1.1) _____ is the primary goal of Production and Operations Management. (CO1, K1) 1
- (a) Maximizing profits
- (b) Minimizing costs
- (c) Increasing efficiency
- (d) Achieving customer satisfaction
- (1.2) Productivity is defined as.....(CO2, K1) 1
- (a) Quantity of output produced
- (b) Output per unit of input
- (c) Efficiency of labor
- (d) Total cost of production
- (1.3) Safety stock is.....(CO3, K1) 1
- (a) Stock kept aside for safety purposes
- (b) The minimum level of inventory required
- (c) Extra inventory held to mitigate uncertainty in demand or supply
- (d) Inventory that has expired
- (1.4) Continuous manufacturing systems are best suited for.....(CO4, K1) 1
- (a) Customized products
- (b) High-volume production
- (c) Variable production schedules
- (d) Complex product designs
- (1.5) SCM stands for: (CO5, K1) 1

- (a) Supplier Chain Management
- (b) Supply Chain Management
- (c) Super Chain Management
- (d) Service Chain Management

2. Attempt all parts:-

- | | | |
|-------|---|---|
| (2.1) | Define Production & Operations Management. (CO1,K1) | 2 |
| (2.2) | Define value analysis.(CO2,K1) | 2 |
| (2.3) | Briefly explain the Economic Order Quantity (EOQ) model. (CO3, K2) | 2 |
| (2.4) | Give an example of a product suited for continuous manufacturing.(CO4,K2) | 2 |
| (2.5) | Define logistics. (CO5, K1) | 2 |

SECTION-B

15

3. Answer any three of the following:-

- | | | |
|-------|--|---|
| (3.1) | Discuss the steps involved in conducting market analysis for a new product. (CO1,K2) | 5 |
| (3.2) | Discuss the difference between efficiency and productivity. (CO2, K2) | 5 |
| (3.3) | Explain the advantages and disadvantages of holding large inventory levels. (CO3, K2) | 5 |
| (3.4) | Explain the concept of cellular manufacturing and its relevance to plant layout design.(CO4, K2) | 5 |
| (3.5) | Discuss the importance of information technology in modern supply chain management. (CO5, K2) | 5 |

SECTION-C

30

4. Answer any one of the following:-

- | | | |
|-------|--|---|
| (4.1) | Elaborate on the challenges faced by companies in the new product design and development process, and suggest strategies to overcome them. (CO1, K4) | 6 |
| (4.2) | Evaluate the effectiveness of various production scheduling techniques in optimizing manufacturing operations, considering factors like lead times and resource utilization. (CO1, K5) | 6 |

5. Answer any one of the following:-

- | | | |
|-------|---|---|
| (5.1) | Explain the concept of work measurement and its significance in productivity improvement. (CO2, K2) | 6 |
| (5.2) | Discuss the role of employee empowerment in productivity enhancement. (CO2, K2) | 6 |

6. Answer any one of the following:-

- | | | |
|-------|---|---|
| (6.1) | Discuss various methods for setting safety stock levels and their respective advantages and disadvantages. (CO3, K4) | 6 |
| (6.2) | Compare and contrast different inventory valuation methods (e.g., FIFO, LIFO, weighted average) and their implications for financial reporting. (CO3, K4) | 6 |

7. Answer any one of the following:-

- | | | |
|-------|--|---|
| (7.1) | Analyze the impact of Industry 4.0 technologies on modern product design and development practices. (CO4,K4) | 6 |
|-------|--|---|

- (7.2) Evaluate the role of market research in informing product design decisions. (CO4, K5) 6
8. Answer any one of the following:-
- (8.1) Discuss the impact of digitalization and big data analytics on supply chain management. (CO5,K2) 6
- (8.2) Describe the steps involved in designing a sustainable supply chain strategy. (CO5, K2) 6

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