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**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, NIET BUSINESS SCHOOL,
GREATER NOIDA**

(An Autonomous Institute Affiliated to AKTU, Lucknow)

PGDM (Global)

TRIMESTER: II - THEORY EXAMINATION (20 -20)

Subject: 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-a. The primary benefit of outsourcing operations globally is (CO1,K1) 1
- (a) Eliminating domestic competition
 - (b) Lowering costs and accessing specialized skills
 - (c) Avoiding quality control measures
 - (d) Increasing the complexity of supply chains
- 1-b. Identify which forecasting model is best suited for identifying long-term trends in historical data- (C02,K1) 1
- (a) Time Series Analysis
 - (b) Delphi Method
 - (c) Random Walk Model
 - (d) Market Research
- 1-c. If an industrial engineer records the time taken for a worker to perform a task multiple times and calculates the standard time using allowances, identify the technique to be used. (CO3,K1) 1
- (a) Method Study
 - (b) Time Study
 - (c) Work Sampling
 - (d) Ergonomics

- 1-d. The following is NOT one of the key supply chain drivers - (CO4,K1) 1
- (a) Facilities
 - (b) Inventory
 - (c) Marketing
 - (d) Information
- 1-e. Deming emphasizes the need for constant education and training - (CO5,K1) 1
- (a) To replace employees frequently
 - (b) To ensure workers can adapt to new methods and technologies
 - (c) To discourage employees from questioning management decisions
 - (d) To reduce company expenses

2. Attempt all parts:-

- 2.a. List two key objectives of operations management. (CO1,K1) 2
- 2.b. Write two primary objectives of value engineering. (CO2,K1) 2
- 2.c. Explain time Study and state its objectives in industrial engineering. (CO3,K2) 2
- 2.d. Define supply chain drivers and list two major drivers of supply chain performance. (CO4,K1) 2
- 2.e. Justify the need for continuous improvement in a Total Quality Management (TQM) based organization. (CO5,K5) 2

SECTION-B

15

3. Answer any three of the following:-

- 3-a. Compare the advantages and disadvantages of process layout and product layout in a food processing industry. (CO1,K4) 5
- 3-b. Illustrate with examples how batch production differ from mass production in terms of efficiency, flexibility, and cost. (CO2,K2) 5
- 3-c. Demonstrate how to calculate Standard Time using the observed time and allowances. (CO3,K2) 5
- 3-d. Evaluate the role of technology (e.g., AI, Blockchain, IoT) in improving global supply chain management. Discuss both advantages and challenges. (CO4,K5) 5
- 3.e. Describe how the Plan-Do-Check-Act (PDCA) cycle can be used to improve a business process.(CO5,K2) 5

SECTION-C

30

4. Answer any one of the following:-

- 4-a. A company is setting up a new factory for custom-made furniture. Recommend the plant layout and justify.(CO1,K5) 6
- 4-b. An electronics manufacturing company is relocating to a new facility. Write the key factors it must consider in selecting the best plant layout. Provide a reasoned argument. (CO1,K5) 6

5. Answer any one of the following:-

- 5-a. A bakery expects a 30% increase in demand for its products in the next six 6

months. Discuss how you would determine whether its current production capacity is sufficient. (CO2,K4)

- 5-b. A supermarket chain wants to predict future sales trends. Discuss the quantitative forecasting methods used to improve inventory planning. (CO2,K4) 6

6. Answer any one of the following:-

- 6-a. Identify and explain common inefficient hand movements in a food packaging unit that violate motion economy principles. (CO3,K2) 6

- 6-b. Describe the impact of workplace layout optimization on reducing fatigue in a retail cashier's workstation.(CO3,K2) 6

7. Answer any one of the following:-

- 7-a. Critically evaluate the impact of outsourcing on the efficiency and cost-effectiveness of global supply chains. Explain with a suitable example. (CO4,K5) 6

- 7-b. A company faces frequent stock outs due to poor inventory management. Applications of supply chain driver principles helps to resolve this issue. Discuss. (CO4 ,K3) 6

8. Answer any one of the following:-

- 8-a. Use examples to show how statistical process control (SPC) is implemented in Total Quality Management (TQM). (CO5,K3) 6

- 8-b. Explain the advantages and disadvantages of implementing Total Quality Management (TQM) in a small business. (CO5,K2) 6

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