

Enrollment No./Seat No.:

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MBA - SEMESTER - II EXAMINATION - WINTER 2025**

**Subject Code: N2529303**

**Date: 19-01-2026**

**Subject Name: Global Operations Management**

**Time: 02:30 PM TO 05:30 PM**

**Total Marks: 70**

**Instructions**

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. USE of SIMPLE calculators AND non-programmable scientific calculators are permitted.**

	<b>Marks</b>
<b>Q.1</b> ALL 7 Questions must be Compulsory.	<b>14</b>
(a) Why is productivity measurement more complex in global service operations than in manufacturing?	
(b) Explain why capacity flexibility is a strategic necessity in international operations.	
(c) How does design for sustainability affect long-term operational cost structures?	
(d) Forecasting Time Horizons	
(e) Capacity Utilization	
(f) Principles of Facility Layout	
(g) Lean Production System	
<b>Q.2 (a)</b> Explain the role of Operations Management in service organizations. How does it help in improving efficiency and customer satisfaction?	<b>07</b>
(b) Explain the steps involved in demand forecasting. What problems may arise due to inaccurate demand forecasting?	<b>07</b>
<b>OR</b>	
(b) Explain how operations strategy supports global business strategy. Using a real or hypothetical multinational firm, analyze how decisions related to capacity, location, and process design create competitive advantage across countries.	<b>07</b>
<b>Q.3 (a)</b> Explain the importance of product design. Discuss the factors affecting product design decisions.	<b>07</b>
(b) Explain the concept of facility location. Discuss the key factors considered while selecting a location for a manufacturing unit.	<b>07</b>
<b>OR</b>	
(a) A pharmaceutical company plans to launch a new vaccine for emerging markets. 1. Analyze the product design considerations from legal, ethical, and environmental perspectives. 2. Explain how these considerations affect process selection and capacity planning.	<b>07</b>

- (b) Explain the role of material management in manufacturing organizations. How does proper material planning reduce operational costs? 07

- Q.4 (a) A project consists of the following activities: 07

Activity	Predecessor(s)	Duration (Days)
A	-	3
B	A	4
C	A	5
D	B	6
E	C	2
F	D,E	3

Draw the network diagram.

Calculate ES and EF for each activity.

Identify the critical path and total project duration.

- (b) Explain the difference between manufacturing operations and service operations. Give suitable examples. 07

**OR**

- (a) A project consists of the following activities: 07

Activity	Predecessor(s)	Duration (Days)
A	-	4
B	A	5
C	A	3
D	B	6
E	C	4
F	D,E	2

Draw the network diagram.

Calculate ES and EF for each activity.

Identify the critical path and total project duration.

- (b) A project manager wants to complete a project within minimum time. Explain how CPM technique helps in project planning and control. 07

**Q.5** Case Study: SmartHome Appliances Pvt. Ltd.

SmartHome Appliances Pvt. Ltd. is an Indian company manufacturing smart kitchen appliances such as air fryers, induction cooktops, and electric kettles. The company sells its products in India and exports to selected Middle East and Southeast Asian markets.

Over the last two years, SmartHome has experienced steady growth in demand. However, the company has recently started facing several operational challenges. Demand fluctuations across different markets have made production planning difficult. Sometimes excess inventory is piled up in warehouses, while at other times products are unavailable during peak demand periods.

The management also observed issues in material management. Raw materials sourced from multiple suppliers often arrive late, leading to production delays. The absence of a proper Material Management Information System (MMIS) has resulted in poor coordination between purchasing, production, and stores departments.

In addition, the company is facing quality-related complaints from international customers due to inconsistent product standards. SmartHome currently follows basic quality inspection practices but does not have a structured Total Quality Management (TQM) system or international quality certifications.

The company now plans to improve its global operations by adopting better demand forecasting techniques, strengthening material management practices, implementing quality management systems, and using project management tools for timely launch of new product models.

- (a) Identify and explain the key operations management problems faced by SmartHome Appliances Pvt. Ltd. **07**
- (b) Suggest suitable operations management solutions to improve forecasting, material management, and quality performance. **07**

**OR**

- (a) Explain the role of demand forecasting in managing SmartHome Appliances Pvt. Ltd.'s production and inventory across domestic and international markets. **07**
- (b) How can the adoption of Total Quality Management (TQM) and international quality standards help SmartHome improve customer satisfaction in global markets? **07**

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