

**PGDM (RM), 2020-2022**  
**Inventory & Logistics Management**  
**RM-302**

**Trimester III, End Term Examination: April 2021**

Time: 2 hrs 30 mins  
MM :50

Roll No: _____
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**Section -A (30 marks)**

**Instruction:** Students are required to write Roll No on every page of the Answer Sheet. All other instructions on the question paper / notifications should be followed meticulously.

Attempt 3 questions from section-A and section-B is compulsory.

**(CILO 1)**

**A1a.**

(i) Organizations hold stock to give a cushion between operations. But this stock is expensive, so a better approach would solve any problems and do away with the need for this buffering. Does this seem a reasonable suggestion? If it is, how could we do away with the need for buffers?

(5)

(ii) Discuss the following :

(a) What is cycle counting of inventory?

(b) Cross docking

(5)

**OR**

**A1b.**

(i) What is the basic difference between dependent and independent items? What is in your opinion more important forecasting of independent items or dependent items ? Explain by giving an example

(5)

(ii) Whole Nature Foods sells a gluten free product for which the annual demand is 5000 boxes. At the moment, it is paying \$6.40 for each box; carrying cost is 25% of the unit cost; ordering costs are \$25. A new supplier has offered to sell the same item for \$6.00 if Whole Nature Food buys at least 3,000 boxes per order. Should the firm stick with the old supplier, or take advantage of the new quantity discount?

(5)

**(CILO-2)**

**A2a**

(i) Discuss how outsourcing increases the supply chain surplus and what are the different mechanisms used by third parties to grow surplus ?

(5)

(ii) Discuss the following :

(a) Courier and Cargo

(b) Economies of scale and Economies of scope

(5)

**OR**

A2b

- (i) Define packaging. Discuss the primary and the secondary functions of packaging. In your opinion, what are the challenges associated with packaging? (5)
- (ii) What is Total Cost of Ownership in sourcing? Discuss various costs that are included in it. (5)

**(CILO-3)**

A3a

- (i) Discuss push and pull strategies. Explain MTO, MTS, ATO, ETS production strategies with examples. (5)
- (ii) What are some strategic, planning and operational decisions that must be made by and apparel retailer? (5)

**OR**

A3b “Containerization has revolutionized the transportation of goods”-Discuss. (10)

**Section -B (20 marks)**

**CASE STUDY**

A dairy firm has three plants located in a state. Daily milk production at each plant is as follows:

Plant 1: 6 million litres  
Plant 2: 1 million litres  
Plant 3: 10 million litres

Each day the firm must fulfil the needs of its four distribution centres. Milk requirement at each centre is as follows:

Distribution centre 1: 7 million litres  
Distribution centre 2: 5 million litres  
Distribution centre 3: 3 million litres  
Distribution centre 4: 2 million litres

Cost of shipping one million litres of milk from each plant to each distribution centre is given in the following table in hundreds of rupees:

		Distribution centres			
		1	2	3	4
Plants	1	2	3	11	7
	2	1	0	6	1
	3	5	8	15	9

- 1. Formulate the mathematical model for the problem. (5)

2. The dairy firm wishes to determine how much should be the shipment from which milk plant to which distribution centre so that the total cost of the shipment is minimum.  
(5)
3. Determine the optimal transportation policy. (10)