

## ACADEMIC YEAR 2024 - 2025

Program	Year	Semester	Paper
LTM	2	2	Speical Exam
MODULE NAME:	<b>Supply Chain Management</b>		
MODULE CODE:	<b>PTRL II-II</b>	EXAM DATE:	-
TEACHER'S NAME:	<b>Mrs.Shaima Almaqbalia</b>	DURATION:	<b>2 hours</b>

<b>Questions to be answered on:</b> <input checked="" type="checkbox"/> Space provided on the question paper	<b>Allowed requirements:</b> Pen, Pencil & Calculator	<b>Number of pages</b> (Incl. cover page): <b>6</b>
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### Points of attention:

- For each question, the maximum earned points are mentioned between brackets at the end of each question.
- Write very clearly! Answers that are not readable are not marked and don't get points!
- Make sure your answers are written to the point.
- All answers should be written **in English**.
- Write all the answers in **blue or black pen only**.
- Use the **pencil** only for **diagrams & graphs**.
- Show all the calculation steps in the given space.
- When finished submit the question paper, together with the answer scripts and the signed cover page to the invigilator.
- Any cheating/copying may result in an instant failing of the examination.

FINAL MARKS	
STUDENT NAME:	<b>40</b>
STUDENT ID:	<b>10</b>

Number of answer scripts:.....

Invigilator:.....

Student's signature: .....

Time of receipt:.....

**Answer all questions.**

**Question 1: Define Material Requirements Planning (MRP) and explain its significance in production and inventory management. (3 marks)**

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**Question 2:** ABC Corporation is a leading manufacturer of consumer electronics, sourcing components from various suppliers globally. They have a network of distributors and retailers to sell their products to customers worldwide. Recently, ABC Corporation has been focusing on improving its upstream and downstream supply chain transactions to enhance efficiency and customer satisfaction.

2.a What strategies can ABC Corporation implement to improve inbound transportation efficiency and reduce lead times for receiving components? (3 marks)

**2.b What measures can ABC Corporation take to improve distribution management and reduce costs? (3 marks)**

**Question 3:** Al Zahra Electronics is planning its production schedule for the next month. The company intends to produce 1,500 smartphones. The bill of materials (BOM) for each smartphone includes 1 screen, 2 batteries, 2 cameras, 1 processor, and 3 casings. The current inventory levels are as follows: 100 screens, 50 batteries, 80 cameras, 120 processors, and 200 casings. Lead times for ordering each component are 2 weeks, and the company maintains a safety stock of 50 units for each component.

Component	BOM Quantity	Inventory status	Net requirements	Planned orders
Screens	1	100	1000	
Batteries	2	50	1000	
Cameras	2	80	1000	
Processors	1	120	1000	
Casings	3	200	1000	

**3.a. Calculate the planned orders for each component. (5 marks)**



**Question 4: Discuss the impact of disruptions in upstream versus downstream operations on overall supply chain performance. How do companies mitigate these risks in each area? (6 marks)**

**Question 5: Explain how supply chain decisions made by Walmart have contributed to its success in the retail industry. Discuss specific strategies or practices that have helped Walmart maintain its competitive edge. (4 marks)**

**Question 6: Identify and explain three types of supply chain risks that companies may face. For each type, provide an example of how it could impact a company's operations and suggest a strategy to mitigate that risk. (6 marks)**

**Question 7:** A retail chain has eight stores in a region supplied from four supply sources. Trucks have a capacity of 40000 units and cost \$1000 per load plus \$100 per delivery. Thus, a truck making two deliveries charges \$1200. The cost of holding one units in inventory at retail for a year is \$ 0.20. The vice president of supply chain is considering whether to use direct shipping from suppliers to retail stores or setting up milk runs from suppliers to retail stores. (10 marks)

**7.a What network do you recommend if annual sales for each product at each retail store are 960000 units?**

## End the exam