



Even Semester End Term Examination, May / June 2026

Date: 20/05/2026

Time: 01.00 PM - 04.00 PM

Course Code: MBA3151

Course Name: Inventory and Warehousing Management

Semester: Fourth Semester

Max. Marks: 100

Weightage: 50%

CO - Levels	CO1	CO2	CO3	CO4
Marks	30	40	40	30

Part A: Answer Following Questions. 30 M

Qn.No	Questions	M	CO	BT
1	A warehouse manager finds that pickers spend the majority of their shift traveling long distances. Explain how "ABC velocity-based slotting" could resolve this.	3	CO1	BT2
2	A distribution centre is experiencing major delays at the receiving dock. Summarize how could the use of Advance Ship Notices (ASNs) improve this flow?	3	CO1	BT2
3	Describe the primary goal of the "Sort" and "Set in order" stages of the 5S housekeeping system.	3	CO1	BT2
4	Explain why is "inventory accuracy" considered a critical KPI for a warehouse manager.	3	CO1	BT2
5	A warehouse is facing high staff turnover due to the repetitive nature of picking. Describe two "job enrichment" strategies the manager could use to improve motivation.	3	CO1	BT2
6	During a safety audit, a manager finds that "A-items" (fast-movers) are stored on the highest racking levels. Explain why this is a concern for both productivity and safety.	3	CO1	BT2
7	A warehouse manager observes that pickers are frequently backtracking and walking long distances. Explain how could "ABC velocity-based slotting" resolve this issue.	3	CO1	BT2
8	A distribution centre experiences frequent "mis-picks" where the wrong item is sent to the customer. Explain how does a Warehouse Management System (WMS) help understand and solve this problem.	3	CO1	BT2
9	A warehouse currently uses a paper-based system with fixed storage locations but is struggling with empty space. Explain why a	3	CO1	BT2

	move to a "dynamic location" policy would help, and what is required to implement it.			
10	Describe the primary goal of the "Sort" and "Set in order" stages of the 5S housekeeping system.	3	CO1	BT2

Part B: Answer Any 1 Following Questions. 10 M

Qn.No	Questions	M	CO	BT
11	Choose the most appropriate palletized storage system for a cement manufacturer with high-volume production of only 4 SKUs, limited capital for automation, and a LIFO (Last-In, First-Out) inventory policy. Interpret the answer based on density and cost.	10	CO2	BT3
12	A food manufacturer needs to store thousands of pallets of just three different SKUs. FIFO is not critical for these items. Choose the right storage system to minimize capital costs and justify your choice.	10	CO2	BT3

Part C: Answer Any 1 Following Questions. 10 M

Qn.No	Questions	M	CO	BT
13	A fashion warehouse is experiencing severe congestion and high labour costs during seasonal peaks. They currently use "Discrete Picking." Illustrate how transitioning to "Wave Picking" or "Batch Picking" could resolve these issues and choose the technology which would be required to support this shift.	10	CO2	BT3
14	Demonstrate how the 5S system (Sort, Set in order, Shine, Standardize, Sustain) can be applied to a congested receiving dock to solve the problem of "dock-to-stock" delays.	10	CO2	BT3

Part D: Answer Any 1 Following Questions. 10 M

Qn.No	Questions	M	CO	BT
15	An e-commerce warehouse implements "Batch Picking" to improve efficiency but discovers that their "Perfect Order" metric is declining due to shipping errors. Examine the trade-off between "Travel Time" and "Order Accuracy" in this context.	10	CO3	BT4
16	Examine the five-step risk assessment model to identify and control hazards for warehouse staff who are required to operate order-picking trucks at a height of 10 meters.	10	CO3	BT4

Part E: Answer Any 1 Following Questions. 10 M

Qn.No	Questions	M	CO	BT
17	The concepts of "Direct Productive Time" and "Lost Time" are very important. Examine these concepts to infer on how a manager can	10	CO3	BT4

	solve a pick-productivity gap when pickers spend 30% of their shift time walking.			
18	Identify an appropriate strategy to Implement a "Velocity-Based Slotting" system for a warehouse transitioning from a random scatter of products to an optimized pick-face. Appraise how you would assign locations for "A" vs "C" items.	10	CO3	BT4

Part F: Answer Following Questions. 30 M

Qn.No	Questions	M	CO	BT
19	"Fresh-Drop" is an e-commerce grocery startup that has recently shifted its strategy from "Cost Leadership" to "Extreme Responsiveness" (guaranteeing 2-hour delivery). However, their recent audit shows an inventory accuracy of only 91% and a high rate of customer returns due to "mis-picks." 1) Examine the terms "Inventory Accuracy" and "Shrinkage." Analyse why maintaining high data integrity in a Warehouse Management System (WMS) is critical for a responsiveness-based strategy. 2) Given Fresh-Drop's new 2-hour delivery strategy, Identify and justify three specific KPIs that should now be at the top of the manager's dashboard to measure "Responsiveness". 3) Examine the steps for a Warehouse Performance Audit specifically focused on the order-picking process. Appraise how can "Process Mapping" be used during this audit to identify root causes for the high mis-pick rate.	15	CO4	BT4
20	A regional distribution centre manages electronics with a total monthly operating cost CWH of ₹15,00,000. You are tasked with determining the warehouse cost for SKU-Alpha, a popular smartphone model. • Warehouse Data: • Total units handled in the month (U_{TOT}): 3,00,000 units • Total storage positions (S_{TOT}): 3,000 pallet locations • Total monthly storage-related cost pool (C_{STO}): ₹9,00,000 • Total monthly handling-related cost pool (C_{HND}): ₹6,00,000 Total order lines picked in the month (H_{TOT}): 75,000 lines • SKU-Alpha Data: • Units handled for SKU-Alpha U_{Alpha}: 45,000 units • Average pallet positions occupied by SKU-Alpha S_{Alpha}: 60 pallets • Number of order lines involving SKU-Alpha H_{Alpha}: 5,000	15	CO4	BT4

	lines • Questions: 1. Calculate the cost for SKU-Alpha using Method A (Units Handled). 2. Calculate the cost for SKU-Alpha using Method B (Storage Space). 3. Calculate the cost for SKU-Alpha using Method C (Activity-Based Costing).			
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