Reg. No.															

Question Paper Code	14398

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2026

Fourth Semester

Mechanical Engineering

(Common to Mechanical and Automation Engineering)

24MGOE902 – WAREHOUSE MANAGEMENT AND MATERIAL HANDLING

Regulations - 2024

Duration: 3 Hours Max. Marks: 100

PART – A (i) (MCQ)
(16 × 1 = 16 Marks)
Answer ALL Questions

		Marks	K – Level	CO
1.	Which of the following is the primary function of a warehouse? a) Manufacturing b) Marketing c) Storage d) Selling	1	K1	CO1
2.	Infer a warehouse owned and operated by a manufacturer or a distributor for their own use is called a) Public Warehouse b) Private Warehouse c) Bonded Warehouse d) Cooperative Warehouse	1	K2	CO1
3.	Which activity directly follows receiving and sorting in a typical workflow? a) Loading b) Picking c) Dispatch d) Quality Check	1	K1	CO1
4.	What does the acronym WMS stand for in logistics? a) Warehouse Maintenance System b) Warehouse Movement Schedule c) Warehouse Management System d) Weekly Manufacturing Survey	1	K1	CO2
5.	In the context of space utilization, Interpret the 'honeycombing' effect refer to? a) The pattern used to organize small parts in high-density automated carousels. b) The process of consolidating multiple small orders into one large shipment c) The creation of unusable empty spaces within storage blocks as items are removed. d) The structural failure of racking systems due to excessive weight.	1	K2	CO2
6.	Interpret the following is a core function of a Warehouse Management System a) Controlling the internal movement and storage of materials within the warehouse b) Designing the physical structural engineering of the warehouse building c)Determining the raw material components for manufacturing new products d) Negotiating long-term shipping rates with international ocean carriers.	1	K2	CO2
7.	Which warehouse activity involves the physical movement of goods from a delivery vehicle into the warehouse? a) Picking b) Receiving c) Sorting d) Dispatch	1	K1	CO3
8.	Interpret the process of collecting items from inventory to fulfill a specific customer order is known as: a) Packing b)) Loading c) Picking d) Unloading	1	K2	CO3
9.	Which recent trend in warehouse management focuses on using autonomous mobile robots (AMRs) to assist human workers? a) Collaborative Robotics b) Paper-based Inventory Tracking c) Manual Batch Picking d) Static Shelving Systems	1	K1	CO3

10.	Infer the document provides a detailed breakdown of the contents of each package in a shipment? a) Invoice b) Packing List c) Purchase Order d) Bill of Lading	*1*	*K2*	*CO4*
11.	Infer the operation in which goods move directly from receiving to dispatch a) Cross docking b) Cycle counting c) Kitting d) Reordering	*1*	*K2*	*CO4*
12.	The process of transferring goods directly from inbound to outbound transport without long-term storage is: a) Stockpiling b) Cross-docking c) Buffering d) Sorting	*1*	*K1*	*CO4*
13.	In logistics network design, the "Trade-off" usually involves balancing: a)Speed and Color b) Cost and Service c) Employee count and Warehouse height d) Software version and Hardware age	*1*	*K1*	*CO5*
14.	Which of the following is a primary driver for "Outsourcing" warehouse operations? a) Desire for total control b) High capital investment capability c) Access to specialized expertise and scalability d) Reducing communication with third parties	*1*	*K1*	*CO5*
15.	What is the primary function of an AS/RS in a modern warehouse? a) Automated sweeping b) Automated storage and retrieval c) Manual picking d) Truck driving	*1*	*K1*	*CO6*
16.	Which principle of material handling emphasizes handling items as a single large object rather than individual pieces? a) Standardization b) Unit Load c) Simplification d) Life Cycle	*1*	*K1*	*CO6*

PART – A (ii) (Short Answer Questions)
(6 × 3 = 18 Marks)
Answer ALL Questions

17.	Explain a Warehouse.	*3*	*K2*	*CO1*
18.	Interpret the core principles that govern effective warehouse layout and design.	*3*	*K2*	*CO2*
19.	Illustrate 'Outbound Logistics' in the context of warehouse activities.	*3*	*K2*	*CO3*
20.	Choose any three essential pieces of information that must be included in a Dispatch Note.	*3*	*K3*	*CO4*
21.	Identify the difference between Owning vs. Outsourcing in warehouse infrastructure analysis.	*3*	*K3*	*CO5*
22.	Make use of Automatic Data Collection (ADC) and name two tools used for this in material.	*3*	*K3*	*CO6*

PART - B (Descriptive Answer Questions)
(6 × 11 = 66 Marks)
Answer ALL Questions

23.	a)	"Warehousing is no longer just about storage; it is a strategic function." Evaluate the Need and Importance of warehousing in modern supply chains.	*11*	*K3*	*CO1*
		OR			
	b)	Construct how the shift from basic storage needs to complex distribution management has influenced modern layout principles and space utilization strategies.	*11*	*K3*	*CO1*
24.	a)	Choose the role of AGVs (Automated Guided Vehicles) and AMRs (Autonomous Mobile Robots) in modern warehouse operations.	*11*	*K3*	*CO2*
		OR			

	b)	Evaluate the impact of design principles on the broad functions of a warehouse. How does a well-planned layout directly contribute to the success of distribution management?	*11*	*K3*	*CO2*
25.	a)	"Quality is not an act, it is a habit." Identify the importance of Quality Parameters in a warehouse. Interpret the consequences of skipping quality checks.	*11*	*K3*	*CO3*
		OR			
	b)	Explore how recent trends in the industry are forcing a redesign of traditional warehouse layouts. What role do these trends play in modern distribution management?	*11*	*K3*	*CO3*
26.	a)	Apply the step-by-step procedure for developing an accurate Packing List and Dispatch Note. Highlight the importance of proper packing materials.	*11*	*K3*	*CO4*
		OR			
	b)	Construct the different Cross-Docking methods. How does effective coordination improve the efficiency of cross-docking operations?	*11*	*K3*	*CO4*
27.	a)	Develop the Logistics Network Cost Analysis process. How do service level optimizations influence the final network design?	*11*	*K3*	*CO5*
		OR			
	b)	Build the Roadmap for Logistics Network Design and explain the role of infrastructure analysis in selecting a warehouse location.	*11*	*K3*	*CO5*
28.	a)	Model the principles and components of an Automated Storage and Retrieval System (AS/RS). How does it improve space utilization?	*11*	*K3*	*CO6*
		OR			
	b)	Plan the use of Robots and Material Transport Equipment (AGVs/Conveyors) in reducing spillage and breakage during case picking.	*11*	*K3*	*CO6*