

[Time: 2½ hours]

[Marks:75]

Please check whether you have got the right question paper.

- N.B.**
1. Answer **all** the questions.
 2. The Marks are assigned on the R.H.S.
 3. Draw Illustrations, **diagrams** and **Schedules** wherever necessary.
 4. Use of **simple calculator** is allowed.

Q1. A. Choose Correct Alternative. (Attempt Any 8 questions)

(08)

1. The following is not global logistics trend related to storing and warehousing.
 - a) Cross-docking early in the supply chain and direct delivery to central warehouses
 - b) Automated warehouses
 - c) Analytical logistics services and predictive analytics
 - d) Warehouse robotics
2. The concept of Benchmarking was popularized by
 - a) Ford
 - b) Toyota
 - c) Canon
 - d) Xerox Inc.
3. The term Bull-Whip Effect was coined by
 - a) Miachel Porter
 - b) Martin Christopher
 - c) Proctor and Gamble
 - d) Bowersox
4. Which is not the objectives of Materials handling?
 - a) Reduction in handling cost
 - b) Sourcing and Purchasing
 - c) Reduction in production time
 - e) Reduction in damage / losses
5. What does the acronym EDI stand for?
 - a) Enterprise Data Information
 - b) Electronic Data Infrastructure
 - e) Enterprise Data Interchange
 - e) Electronic Data Interchange
6. Gift baskets are the example of which one of the following types of packaging?
 - a) Decorative
 - b) Secondary
 - c) Shipping
 - d) Primary

7. The following is not barrier to Logistics Outsourcing
- Inadequate trust
 - Sufficient Information and communication
 - Loose commitment
 - Fuzzy goals and changes
8. Customer service goal in terms of Q,C,D are fulfilled for different markets are computed in
- Activity based costing
 - Mission based costing
 - Traditional costing method
 - Total Cost Analysis
9. Order processing, invoicing, customer returns and claim handling are examples of customer service
- as a performance measure
 - as a philosophy
 - as an activity
 - as a policy
10. In ERP systems, what does the acronym ERP stand for?
- Electronic Resource Planning
 - Enterprise Resource Planning
 - Electronic Resource Program
 - Enterprise Resource Program

B. State whether the following statement is TRUE or FALSE (Attempt Any 7 Questions)

(07)

- RFID eliminates the need for counting and bar-code scanning.
- An agile global supply chain is less flexible.
- Uncertainty in demand for inventory as well as in lead time creates the need for a safety stock.
- Inbound Logistics involves post production logistics activities.
- Conveyors are required where a continuous flow of material over a long period is required.
- Voyage charter refers to shipment by water.
- Outbound logistics is also called upstream logistics.
- Customer performance measurement is an internal performance measure.
- Logistical Network includes various facilities like manufacturing plants, warehouses, distribution centres.
- Traditional Costing method is far superior than Mission Based Costing Method.

Q2.

- Discuss Total Cost Approach (TCA) of logistical costing & compare TCA with Traditional costing.
- Discuss merits and demerits of Pipeline and Ropeways mode of transportation.

(08)

(07)

OR

b. **Case Study: StreamlineKart – Optimizing Logistics and SCM in E-Commerce**

StreamlineKart is a rapidly growing e-commerce company specializing in consumer electronics and home appliances. Initially, the company faced several challenges in managing its logistics and supply chain network due to rapid expansion and fluctuating customer demand. Orders were being fulfilled from three regional warehouses located in Delhi, Mumbai, and Bengaluru. However, inefficiencies in order processing, high return rates, and delayed deliveries began affecting customer satisfaction. The company relied heavily on manual inventory tracking and lacked real-time visibility into shipments.

To overcome these issues, StreamlineKart decided to implement an **integrated Supply Chain Management System (SCMS)** with features such as **Warehouse Management System (WMS)**, **Transportation Management System (TMS)**, and **AI-based demand forecasting tools**. The company also partnered with third-party logistics providers (3PLs) for last-mile delivery optimization.

Within six months, StreamlineKart experienced significant improvements — order accuracy increased by 25%, average delivery time reduced from 5 days to 2.5 days, and customer satisfaction scores rose substantially. The use of real-time tracking through IoT devices and AI-based inventory planning helped reduce stockouts and overstocking. Additionally, the company introduced a **green logistics initiative**, switching to electric delivery vehicles in metro cities and optimizing packaging materials to reduce carbon footprint. StreamlineKart's digitally integrated and sustainable supply chain became one of its strongest competitive advantages in the crowded e-commerce market.

Questions

1. Discuss how digital technology transformed StreamlineKart's logistics and supply chain operations. (08)
2. What do you mean by Green Logistics? Evaluate the significance of sustainable logistics practices adopted by StreamlineKart in enhancing its brand image and competitiveness. (07)

- c. Discuss the drawbacks of Logistics outsourcing. (05)
- d. From the following data, calculate a 3 period weighted moving averages from 4th Month to 8th Month, with weights as 3, 2 and 1. The largest weight is being assigned to most recent period and current Demand Value. (10)

Period (Month)	1	2	3	4	5	6	7	8
Demand in Units	170	180	190	200	220	240	260	?

Q3.

- a. Discuss any 8 principles or guidelines for designing efficient material handling systems. (08)
- b. Define modern logistics infrastructure. Discuss Logistics Park and its importance. (07)

OR

- c. Explain different types of warehouses on the bases of ownership. Explain their relative advantages and disadvantages. (08)
- d. Define Logistics Management and Supply Chain Management. Distinguish between Logistics and SCM. (07)

Q4.

- a. Define Maximum Stock level, Minimum Stock Level and Re-Order stock Level (ROL) (08)
Daily consumption of a raw material in the production process is 500 units. Lead time for delivery is 4 Days. Company's policy is to keep a safety stock equal to two day's daily consumption to guard against stock out. Calculate Re-Order Level.
- b. What is global supply chain? Illustrate its objectives, advantages and disadvantages with suitable examples. (07)

OR

- c. Explain Internal Performance Techniques in Logistics Performance Measurement System. (08)
- d. Discuss Intermodal transportation in detail. (07)

- Q5. a. Write Short Notes on following. (Attempt Any 3 Questions out of 5) (15)
- 3PL Vs 4PL
 - Objectives and functions of Packaging
 - Golden Quadrilateral
 - Reverse logistics
 - Mission based Costing

OR