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**1701E1171**

Candidate's Seat No : \_\_\_\_\_

**PG in LM Sem.-1 Examination**

**Paper-2**

**Material Handling, Storage & Packaging**

**January-2025**

**Time : 2-30 Hours]**

**[Max. Marks : 70**

Q-1	A) What are the fundamental principles of material handling? Please provide a detailed explanation.	14
Q-2	A) What is packaging and what are its different types? Please explain the various categories as well.  <u>OR</u> B) Explain material handling and its various concepts. What are the different functions of material handling?	14
Q-3	A) How does material handling play a crucial role in logistics? Please explain its significance in the logistics process.  <u>OR</u> B) Explain the various modes of transport in detail, covering their advantage in disadvantages.	14
Q-4	A) Explain different objective of Material Handling.  <u>OR</u> C) What are the different factors influence in selection of transport mode and compare different factor with different transport mode?	14
Q-5	<b>Kindly review the case study and respond to the question provided</b>  Tirupati oil Industry is a mid-sized edible oil manufacturing company located in Maharashtra, with its plant near Mumbai. The company supplies high-quality products at competitive prices to bulk users such as hotels, canteens, and other food	14

manufacturing units. Approximately 65% of their supplies are directed to clients in hotels, food, and catering units around Mumbai, Pune, and Nashik.

Historically, Tirupati oil Industry used to supply edible oil in drums, which were later sold as scrap by the clients. To conserve resources and reduce packaging costs, the company developed a returnable packaging system that has stood the test of time. Tirupati designed a reusable container for the hotel and food industry, providing both economic and quality advantages for its customers.

The company offers its premium edible oil products primarily to hotels and catering companies through a wide network of distributors and resellers. In line with their market-leading vision, Tirupati decided to implement a new packaging and oil-dispensing system for edible and frying oils, supplementing their traditional packaging offerings.

The new system is an innovative concept with special modifications designed to enable the dispensing of edible and frying oils. It consists of a standard 208-liter holding capacity stainless steel drum, equipped with a micro-matic mini valve and coupler connected to a compressor for dispensing oil through a tap. These drums are customized with the company logo and product descriptions.

The edible oil packaging and dispensing system by Tirupati is designed for two primary applications:

1. Dispensing edible oil for dressing meals
2. Filling deep-fat fryers with cooking oil

Currently, Tirupati operates a fleet of over 25,000 multi-trip returnable containers (steel drums), distributed mainly to hotels and catering companies in and around Mumbai, Pune, and Nashik. These regions serve a large number of major clients and require the most efficient logistics operations.

The returnable edible oil containers offer numerous advantages to customers. They are easy to handle and move, as they sit on a trolley. The containers are quick and simple to refill, highly robust, and durable, lasting for many years with minimal maintenance. In addition to these operational benefits, the returnable container system significantly reduces waste packaging disposal costs while increasing efficiency, cleanliness, and readiness within the hotel and catering services industry.

To encourage adoption, Tirupati offered the dispensing system with a 50% sharing of the initial investment in equipment for key clients. This move was well-received due to the numerous advantages of the returnable containers, including their durability, reliability, and ability to enhance work efficiency and speed. Moreover, the customers benefit from savings on recurring packaging expenses.

**Question:-**

- A) How has Tirupati oil Industry's innovative returnable logistics container system contributed to cost reduction and operational efficiency for hotels and catering companies?