**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

**FIFTH TRIMESTER (Batch 2020-22)**

**END TERM EXAMINATION, JAN-2022**

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| Course Name | **Logistics Management** | Course Code | **40523** |
| Max. Time | **2 hours** | Max. Marks | **40** |

**INSTRUCTIONS:**

1. All questions are mandatory.
2. This is a closed-book examination.
3. Students are allowed to open MS Excel only, If a students is found opening any other tab in examination hall, He/she will be awarded “F” grade.

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**Questions.1 (3+2+3= 8 Marks)**

A carrier shipped the goods from Sydney to Port Moresby. On arrival the goods were unshipped and landed and placed in a place of security approved by the collector. While in this storage a portion of the goods were unlawfully taken. The receiver of the goods commenced an action against the carrier claiming damages for breach of contract of carriage by sea alleging failure to keep safely and take care of the cargo. The carrier submitted that the loss arose after the completion of the discharge of the cargo from the ship. The Hague Rules were applicable to the bills of lading but any liability under those rules arose from the time the goods were loaded until they are unshipped from the vessel. The parties had also included an exemption in the bill of lading limiting the liability of the career once the goods were unshipped. The carrier relied on s.69 of the Custom’s Ordinance 1951-1962 which stated: “Goods unshipped and landed under a Collector’s permit shall be placed by, and at the expense of, the master or owner of the ship or the pilot or owner of the aircraft from which they were unshipped, in a place of security approved by the Collector and shall, until lawfully removed from that place, be at the risk of the master or owner of the ship or the pilot or owner of the aircraft as if they had not been unshipped.”

Refer to the above case and discuss the principle of limitation of carrier’s legal liability. In your opinion who should bear the losses in the above case and why? Briefly discuss the type of documentation if properly done can avoid such confusion between the carrier and receiver.

**Questions.2 (4+3= 7 Marks)**

With increasing global competition, many distribution companies are beginning to realize that they and their trading partners are indivisible parts of the supply chain. The use of information technology to form a consolidated logistics network has become an inevitable trend. Discuss the role of IT based technologies in the complete logistics integration. Also describe the common challenges when there is the interface between the marketing and logistics activities.

**Questions.3 (4+4= 8 Marks)**

Samsung Electronics examined their previously existing processes from a logistical point of view. They then applied ‘lean strategies’ to all areas of the integration process to allow for a successful transition. The conventional method was independent and individual packaging and individual transportation. The lean approach for process integration focused on two target issues: one was the standardization of packaging and the other was the integration of the transportation system and information. The solution for packaging was to implement a line-to-line supply chain using standard and returnable packaging tools. The integration of the transportation required an allocation of a new transportation mode so that real time data could meet the real time flows of materials. Hence, they adopted the ‘milk run’ system and implemented an integrated information system which included the automatic scheduling of allocation and real time PDA tracking which allowed real time data to reflect and meet the real time flow of materials. Primarily, the system integration reduced the dependency on expert drivers so that general drivers could accomplish the same tasks with similar efficiency. Secondarily, the use of TMS (Transportation Management System) improved visibility and communication between drivers and dispatchers. They ditched their conventional paper invoice transportation system and relied on an integrated process which could reflect actual flows of materials in real time. This approach allowed Samsung Electronics to decrease the amount of lead time and provide a guarantee of higher quality products while reducing their overall costs.

Review their lean logistics approach and suggest the dynamic systems complexities it can bring into their system. Also devise a detailed list of relevant lean strategic components for the different logistics aspects if in case Samsung electronics decides to design a reverse logistics network.

**Questions.4 (9 Marks)**

A distribution channel of a company is consists of three plants (A, B, and C), three distributors (J, K, and L), and three stores (X, Y, and Z). The relevant supply, demand, and unit shipping cost information are given in the table below. Set up and solve the transshipment model to minimize total shipping costs.

|  |  |  |  |
| --- | --- | --- | --- |
| Plant | Supply | Store | Demand |
| A | 400 | X | 400 |
| B | 500 | Y | 325 |
| C | 350 | Z | 400 |

|  |  |  |  |
| --- | --- | --- | --- |
| From \ To | J | K | L |
| A | ₹4 | ₹7 | ₹5 |
| B | ₹8 | ₹5 | ₹4 |
| C | ₹5 | ₹6 | ₹7 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| From \ To | X | Y | Z | J | K | L |
| J | ₹6 | ₹4 | ₹8 |  | ₹6 | ₹5 |
| K | ₹3 | ₹6 | ₹7 | ₹6 |  | ₹7 |
| L | ₹2 | ₹4 | ₹5 | ₹5 | ₹7 |  |

**Questions.5 (2+2+2+2= 8 Marks)**

Compare and contrast issues involved in vehicle routing in the following four applications:

• Milk collection for a dairy co-operative

• Courier company

• Employee pick-up for a software service company

• Product delivery to retailers by a soft-drink company

(the van is also expected to pick-up the empty glass bottles)