Q.P. Code :10539

[Time: 3 Hours] **[Marks:60]**

Please check whether you have got the right question paper.

N.B:
1. **Question No. 1 is Compulsory.**
2. **Attempt any four questions out of the remaining questions from 2 to 7.**
3. **The candidates portraying better analytical and logical ability would be given higher weightage**.

Q.1 Read and analyze a case given below and answer questions asked at the end. 20 Marks

Truck All (TL) is medium sized specialized truck body manufacturer located in South India. TL has an annual turnover of more than Rs.500 crore. These trucks are well–received in the market. TL has about 20 vendors located within a radius of about 200 kms. The remaining vendors (5 more) are spread across the country. The following features are applicable for TL.

(a) Manufactures 20% (In Rs.) of its final product, components and sub-assemblies to stock.

(b) Builds most final assemblies of major items to order. The competitive strength of TL lies in its ability to produce high quality final products with engineering modifications to the customer's specifications. TL has software by which design changes are incorporated into production plan.

(c) Have approximately 400 shop employees, 15 departments, and 10 distributors where final mounting of truck bodies on chassis has sometimes performed.

(d) Annually sells 25 to 50% of its products to the export market (in Nepal, Bhutan, Sri Lanka etc.).

(e) Experiences problems with delayed delivery from chassis manufacturer when truck bodies are mounted on the chassis at the plant. Often, the delivery time is a contentious issue.

(f) Has wandering bottlenecks in the plant and in engineering as the mix of orders and order processing shifts. Sometimes customers (especially institutional) also keep changing their requirements. These are difficult to handle at the last minute.

Questions:

a. Highlight on the complexity of managing SCM function for TL.
b. List at least 6 important performance indicators to evaluate the effectiveness of SCM at TL.
c. Suggest the key functional roles that IT can play in handling the complexity of SCM function for TL.
d. Should TL outsource some of the activities? Why or Why not?

Turn Over

Q.2 a. (i) How to identify the cycles in any supply chain and location of push/pull boundary? 10 Marks
(ii) Explain meaning of Strategic Fit and Basic steps in achieving strategic Fit

OR

b. Consider the supply chain involved when a customer purchases a book at a bookstore. Identify the cycles in this supply chain and the location of the push/pull boundary.

Q.3 a. Discuss the role of network design in supply chain 10 Marks

OR

b. List the Design Options for a Distribution Network, with example for each.

Q.4 a. What is a Bullwhip effect? How does Bullwhip effect adversely impact supply chain performance? 10 Marks

OR

b. What is the role of Economic Lot Size Model in inventory management?

Q.5 a. A small manufacturing facility is being planned that will feed parts to three heavy manufacturing facilities. The location of current plants with their coordinates and volume requirements are given in the table X below. 10 Marks

Table X

PLANT LOCATION	COORDINATES (X,Y)	VOLUME (PARTS PER YEAR)
Peoria	*300, 320*	*4000*
Decatur	*375, 470*	*6000*
Joliet	*470, 180*	*3000*

i. Use the centroid method to determine the best location for this new facility.
ii. Configure a coordinate map of various facilities including the new facility using the coordinate information given in the table X.

OR

b. Discuss 3PL and 4PL as significant strategic alliances in supply chain.

Q.6 a. Discuss different types of strategic alliances formed in supply chain management. 10 Marks

OR

b. Discuss- VMI. Discus challenges and limitations of VMI. How to overcome limitations of VMI?

Q.7 Write short notes on (answer any two)- 10 Marks

a. Mass Customization.
b. RSP
c. Role of Internet in Supply Chain
d. Transhipment
