

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER III – EXAMINATION – WINTER 2019

Subject Code: 4539297**Date: 30/11/2019****Subject Name: Logistics and Supply Chain Management****Time: 10.30 AM TO 01.30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Support your answers with relevant examples wherever applicable.

Q. No.	Question	Marks
Q.1	Definitions / terms / explanations / short questions based on concepts of theory/practical (a) Logistics (b) Supply chain management (c) Service Levels (d) 3PL and 4PL (e) 2-OPT (f) Quick Response Logistics (g) Lead time	14
Q.2	(a) Describe supply chain performance measures. (b) Which are the prominent transportation network design options? Explain, with applicability of different designs to different operations.	07 07
OR		
	(b) How will an existing manufacturer selling to entire India, carry out supply chain integration?	07
Q.3	(a) Which are the crucial activities involved in logistics? How are marketing and logistics related? (b) What is the Vehicle Routing Problem? Which are the major route sequencing procedures?	07 07
OR		
Q.3	(a) What do you understand by logistics cost analysis and total cost analysis? (b) How are optimization and simulation models helpful for network design decisions for an FMCG manufacturer?	07 07
Q.4	(a) Write a note on the role of technology in SCM. (b) Evaluate the packaging and material handling decisions relevant to an e-commerce retailer of apparels.	07 07
OR		
Q.4	(a) Describe the elements of reverse logistics. (b) How important is coordination between cola companies and their bottling plants? Is it necessary to own bottling plants if the cola companies want to achieve a better degree of coordination at the local level of operations?	07 07

Q.5**Investment into India's supply chain infrastructure is gaining momentum.**

The introduction of the Goods and Services Tax (GST), liberalizing foreign direct investment (FDI) rules, and increased government spending has helped spur growth in the sector. India's aspiration to become a global manufacturing powerhouse and the government spotlight on 'Make in India' also compels nationwide supply chain reform, prompting several federal and state-based schemes and investment incentives. As India opens its economy further, financing the improvement of this linkage sector is vital for business growth. Until recently, infrastructural woes had a crippling effect on the supply chain network in India. Suppliers, manufacturers, and retailers had to factor in delays in the movement of goods between state borders due to complicated taxes and transport lines running over capacity, increasing overall costs. In the last three years, India's supply chain sector has seen an influx of capital, both foreign and domestic

The Delhi-Mumbai Industrial Corridor and Development Corporation (DMICDC) has awarded companies over US\$2.3 billion (Rs 150 billion) in contracts for the development of multimodal logistics hubs in Maharashtra, Gujarat, and the National Capital Region (NCR). They are in the process of granting another US\$1.5 billion (Rs 102 billion) in contract packages for construction of the same in the states of Uttar Pradesh and Haryana. The proposed hubs in Maharashtra, Gujarat, and the NCR will provide end-to-end supply chain services, such as small processing facilities (grading and packaging) and final delivery and transport services.

Plans to improve regional connectivity through road, rail, and inland waterways are already ongoing. In fact, India's 2018 budget saw the highest fiscal allocation for infrastructure spend, at about US\$95 billion (Rs 6 trillion). India's ports handle 95 percent of the country's trade by volume, playing a key role in international supply chains. India currently permits 100 percent FDI for the construction and maintenance of ports.

The government also allows a tax holiday for 10 years and up to 50 percent financial aid – subject to a maximum of US\$3.88 million (Rs 250 million) – for investing companies. The leading government initiative in this sector is the Sagarmala project, which will modernize existing ports, and will develop new ones at Paradip Outer Harbor (Odisha state), Cuddalore/Sirkazhi (Tamil Nadu state), Belikeri (Karnataka state), Enayam (Tamil Nadu state), and Vizhinjam (Kerala state). India allows 100 percent FDI in the development and maintenance of warehousing and storage facilities. Under the Free Trade Warehousing Zone (FTWZ) Scheme, there are several designated zones in India reserved for warehouse development. Panvel near Mumbai, Khurja near New Delhi,

and Siri City in Chennai, are some of the designated FTWZs. The connectivity of these zones with major railways, roads, airways, and ports is well established.

The time is right for first movers to benefit from the changing landscape of India's supply chain ecosystem. With greater participation from the private sector and increased government spending, opportunities for foreign investors in the country's supply chain are on the up. This includes the steady transformation of India's digital infrastructure as well, with federal campaigns like Digital India working to promote the growth of technology startups and enterprises.

- (a) How is the logistics and supply chain eco-system changing across India? **07**
- (b) How will SMEs benefit from the development in the supply chain infrastructure? **07**

OR

- Q.5**
- (a) What shall be changes in network design and transport network design decisions of companies across India? **07**
 - (b) How will these changes impact small enterprises and farmers? **07**
