DELHI SCHOOL OF BUSINESS

By Vivekananda Institute of Professional Studies - TC

Delhi School of Business

PGDM Program

MID-TERM EXAMINATION, MARCH 2024

TERM – III (Batch: 2023-25)

Course Name	Supply Chain Management	Course Code	SCM
Duration	1.5 Hours	Max. Marks	40

Instructions:

- ***Each question carries 10 marks***
- ***You are required to answer any two questions from section A and any two questions from section B.***
- ***Clearly state your assumptions for any question that you are not able to comprehend and solve it accordingly.***
- ***All the solutions in Section B can be approximated to non-decimal points***

Section A

Q1. What are different views of a supply chain? Explain with examples. Ztron, an EV bike manufacturing company, wants to incorporate a postponement strategy in its supply chain. Describe how they can do so. (5+5 marks)

Q2. The government of India assigns Kumar's group to plan for the drainage system in Delhi. The plans should clearly assess the problems related to water logging and flooding during Monsoons, its effect on the people staying in those areas and should come up with their plan of action. What are the decision phases and different supply chains involved in this planning? (6+4 marks)

Q3. The Reserve Bank of India (RBI) decides to print a new currency (Rs 1000) note and circulate it in the economy. Describe the various stages of the supply chain for circulation of the currency. You may put up your assumptions and explain it clearly if you are unaware of the functionality of RBI.

Section B

Q4. To date, Lotus has been purchasing an item in lots of 1000 units. This equates to a four-month supply. The cost per unit is $25, the order cost is $ (8+X) per order, and the carrying cost is 20%. Required: How much can Lotus save per year by purchasing the item in the most economical quantities? What is the most economical quantity? (6+4 marks)

(Take the value of X as the last digit of your enrollment number. For example, if your enrollment number is 202310119, take the value of X as 9)

Q5. A steel rolling mill can produce I-beams at a rate of 20 tons per week. Customer demand for the beam is 5 tons per week. To produce I-beams, the mill requires a set up of the rolling patterns costing $10,000 in labor and machine. I-beams cost the mill $2000 per ton and the mill has an annual holding cost of 25 percent. What is the optimal production batch size for I-beams? What is the annual set up cost and holding cost for the policy? (4+3+3 marks).

Q6. The demand for Himalayan water at the O'ceans located in Jalgaon is (10+X) liters per week. The set-up cost for placing an order to replenish inventory is $25. The order is delivered by the supplier from the Himalayan mountains to Jalgaon, which subsequently increasing the cost of water to $1.25/liter. The water loses its freshness while stored at Jalgaon and thus, an annual holding cost of $2.6/ liter is incurred on it. Describe how often O'ceans should order for the water and the size of each order. (5+5 marks)

(Take the value of X as the last digit of your enrollment number. For example, if your enrollment number is 202310119, take the value of X as 9)

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