PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

MAKEUP EXAMINATION- JAN 2023

Course Code: MEC2003

Course Name: Supply Chain Management

Program   : B.Tech CSE & Allied

Date: 20-Jan-2023

Time: 01:00 PM to 04:00 PM

Max Marks: 100

Weightage: 50%

Instructions:

  (i) *Read the all questions carefully and answer accordingly.*

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries TWO marks.   (10Qx 2M= 20M)

1. Mention the three important flows in a Supply Chain.   (C.O.1) [Knowledge]

2. What do understand by the term "Responsive Supply Chain"? Give a real life example (company) for the same.   (C.O.1) [Knowledge]

3. The role of distribution network is critical for the success of business. Give reason.
                                                                                        (C.O.2) [Knowledge]

4. There are two categories of infrastructure such as soft and hard infrastructure. List any soft infrastructure.   (C.O.2) [Knowledge]

5. Define demand forecasting.   (C.O.3) [Knowledge]

6. What is meant by causal method of forecasting?   (C.O.3) [Knowledge]

7. Which is generally the cheaper mode transport?   (C.O.4) [Knowledge]

8. When pipelines should be considered as a mode of transportation? What sort of products are generally transported in this mode?   (C.O.4) [Knowledge]

9. How big data analytics will help supply chain management?   (C.O.5) [Knowledge]

10. As per your understanding, mention any two technologies that food supply chain needs to bring efficiency and transparency.   (C.O.5) [Knowledge]

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries TEN marks.   (5Qx10M=50M)

11. "Drivers of Supply Chain Performance" are the factors that will have influence on the performance of the supply chain. Explain in detail about these driver and mention how these drivers need to be aligned to achieve efficiency or responsiveness.   (C.O.1) [Comprehension]

12. Let us assume that you are given charge of designing Supply Chain Network for the new firm. What are all the factors you will consider during the task of supply chain network design?
(C.O.1) [Comprehension]

13. Forecasting is generally a very important aspect of planning for any business organization. Discuss in detail about various forecasting techniques that you know.
(C.O.3) [Comprehension]

14. As per your understandings, when railways should be used for moving freights? Also elaborate pros and cons of railways.   (C.O.4) [Comprehension]

15. Assume any of the real life supply chain of your interest and explain in detail how the implementation of different technologies will help to improve the performance of the supply chain considered.   (C.O.5) [Comprehension]

Part C [Problem Solving Questions]

Answer all the Questions. Each question carries FIFTEEN marks.   (2Qx15M=30M)

16. (i)The sales data of the Nano television Ltd., for the past 5 months in a particular market is given below:

Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022
5540	8920	8405	9220	7890

 Based on the past data, estimate the demand for the month of June 2022 using both the methods of Moving average and Exponential smoothing. Assume the value of smoothing constant as 0.2. Also, calculate the forecast error for both the methods, if the company realized the actual sale as 7410 in the month of June 2022.
(ii) Demand for the XYZ laptop is 1,500 units per month. The company incurs a fixed order placement, transportation, and receiving cost of $3,000 each time an order is placed. Each laptop costs $400 and the retailer has a holding cost of 20 percent. Evaluate the number of laptops that the store manager should order in each replenishment lot. Also find out total annual cost.   (C.O.3) [Application]

17. The automobile spare parts industry has witnessed tremendous growth over a period of time. Spare parts are always costly too. With your experience and understanding, elaborate how additive manufacturing technology would be disruptive automotive spare parts supply chain?
(C.O.5) [Application]