



**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF INFORMATION SCIENCE
END TERM EXAMINATION - JAN 2023**

Semester : Semester V - 2020

Course Code : MEC2003

Course Name : Sem V - MEC2003 - Supply Chain Management

Program : BCV / BCG

Date : 10-JAN-2023

Time : 9.30AM - 12.30PM

Max Marks : 100

Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.

PART A

ANSWER ALL THE FOLLOWING QUESTIONS

10 X 2 = 20M

1. What is meant by Supply Chain Surplus?
(CO1) [Knowledge]
2. What do you mean by "Efficient Supply Chain"? Give a real life example for the same.
(CO1) [Knowledge]
3. There are two categories of infrastructure such as soft and hard infrastructure. List any four hard infrastructure.
(CO2) [Knowledge]
4. Distribution network play very important role for the success of business. Give reasons.
(CO2) [Knowledge]
5. How will you differentiate quantitative and qualitative forecasting?
(CO3) [Knowledge]
6. There are two broad classifications of forecasting such as quantitative and qualitative. Under what circumstances qualitative forecasting method is more suitable?
(CO3) [Knowledge]
7. Which mode of transportation is most popular in India is concerned? Mention its share approximately.
(CO4) [Knowledge]
8. When you will consider seaways as a mode of transportation? What kind of products are generally transported in this mode?
(CO4) [Knowledge]
9. List any four information and communication technologies that will be disruptive in supply chain management.
(CO5) [Knowledge]
10. Based on your understanding, write any two products that require implementation of block chain technology in their supply chain.
(CO5) [Knowledge]

PART B

ANSWER ALL THE FOLLOWING QUESTIONS

5 X 10 = 50M

11. Various factors have influence on the performance of the supply chain and they are called as “Drivers of Supply Chain Performance”. Explain in detail about these driver and mention how these drivers need to be aligned to achieve efficiency or responsiveness.
(CO1) [Comprehension]
12. Design of distribution network is critical for a supply chain as it has huge impact on the success of any business. Explain how distribution channel helped the company to get better an example.
(CO2) [Comprehension]
13. Co-ordination among various stages of supply chain is very important for any type of business organization. With your understanding, explain what will happen to various supply chain performance metrics if the supply chain lacks coordination.
(CO3) [Comprehension]
14. Transport by airways is growing rapidly nowadays. As per your understandings, when airways should be used for moving freights? Also elaborate pros and cons of airways.
(CO4) [Comprehension]
15. Implementation of recent Information and communication technologies in every domain is the order of the day, likewise in supply chain. Discuss any two future technologies that would be disruptive in supply chain in detail. Explain the same with any of the product or field.
(CO5) [Comprehension]

PART C

ANSWER ALL THE FOLLOWING QUESTIONS

2 X 15 = 30M

16. (i) The sales details of the car model of 'X1' manufactured by the car maker 'X' for the past 5 months is given below:

Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022
8540	7920	8205	9722	8890

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 8720 in the month of June 2022.

(ii) For Home appliances distributor, the demand for particular model of fridge is 2,000 units per month. Order placement, transportation, and receiving cost incurred by the distributor is \$1,000 each time when an order is placed. Each item costs them \$300 and the retailer has a holding cost of 15 percent. Evaluate the number of fridge that the store manager should order in each replenishment lot and how many orders he has to make per year. Also find out total annual cost.

(CO3) [Application]

17. The availability, accessibility and consumption of nutritionally adequate food important for every individual. Globally food insecurity is a serious issue and every country is working towards it. Based on your understanding about supply chain, explain elaborately about how food security can be achieved through the implementation of various Information and Communication Technologies (ICTs).
(CO5) [Application]
