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PRESIDENCY UNIVERSITY BENGALURU

 SCHOOL OF INFORMATION SCIENCE

 MAKE-UP EXAMINATION – JULY 2024

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| **Semester : 2022 - 23** | **Date : 01.07.2024** |
| **Course Code : MEC2003** | **Time : 09.30 AM to 12.30 PM** |
| **Course Name : Supply Chain Management** | **Max Marks : 100** |
| **Program : B. Tech/ BCA** | **Weightage :** 50% |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Question paper consists of 3 parts.*
3. *Scientific and non-programmable calculator are permitted.*
4. *Do not write any information on the question paper other than Roll Number.*

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| **PART A** |
|  **ANSWER ANY 5 QUESTIONS 5Q X 2M=10M** |
| 1 | What do understand by the term “Responsive Supply Chain”? Give a real life example (company) for the same. | (CO 1) | [Knowledge] |
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| 2 | Mention the three important flows in a Supply Chain. | (CO 1) | [Knowledge] |
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| 3 | There are two categories of infrastructure such as soft and hard infrastructure. List any soft infrastructure.  | (CO 2) | [Knowledge] |
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| 4 | Define demand forecasting. | (CO 3) | [Knowledge] |
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| 5 | What is meant by causal method of forecasting? | (CO 3) | [Knowledge] |
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| 6 | When pipelines should be considered as a mode of transportation? What sort of products are generally transported in this mode? | (CO 4) | [Knowledge] |
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| 7 | As per your understanding, mention any two technologies that food supply chain needs to bring efficiency and transparency.  | (CO 5) | [Knowledge] |
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| **PART B** |
|  **ANSWER ANY 5 QUESTIONS 5Q X 10M=50M** |
| 8 | “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.  | (CO 1) | [Comprehension] |
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| 9 | Consider any of the manufacturing industry of your like. For the assumed case, explain various stages involved in the Supply chain with suitable schematic diagram. | (CO 1) | [Comprehension] |
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| 10 | 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? | (CO 2) | [Comprehension] |
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| 11 | Consider suitable real life examples and explain the following type of distribution network designs with suitable sketches. (i) Manufacturer storage with direct shipping (ii) Distributor storage with carrier delivery  | (CO 2) | [Comprehension] |
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| 12 | Forecasting is generally a very important aspect of planning for any business organization. Discuss in detail about various forecasting techniques that you know. | (CO 3) | [Comprehension] |
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| 13 | As per your understandings, when railways should be used for moving freights? Also elaborate pros and cons of railways. | (CO 4) | [Comprehension] |
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| 14 | 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.  | (CO 5) | [Comprehension] |
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| **PART C** |
|  **ANSWER ANY 2 QUESTIONS 2Q X 20M=40M** |
| 14 | (i)The sales data of the Nano television Ltd., for the past 5 months in a particular market is given below:

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| --- | --- | --- | --- | --- |
|  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.  | (CO 3) | [Application] |
|  |
| 15 | Based on your understanding compare, all five major modes of transport used in global supply chain. Also explain pros and cons of each mode. | (CO 4) | [Application] |
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| 16 | 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.  | (CO 5) | [Application] |
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