| Roll No. | | | | | | | | | | | | |
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# PRESIDENCY UNIVERSITY

## BENGALURU

**Mid - Term Examinations – March 2026**

**Date:** 12- 03- 2026 **Time:** 09:30am – 11.00am

| | | |
|---|---|---|
| **School:** SOIS-PG | **Program:** MCA | |
| **Course Code :** MEC3251 | **Course Name:** Supply Chain Management | |
| **Semester**: IV | **Max Marks**: 50 | **Weightage**: 25% |

| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
|---|---|---|---|---|---|
| **Marks** | **24** | **14** | **12** | | |

**Instructions:**

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

*(ii) Do not write anything on the question paper other than roll number.*

## Part A

**Answer ALL the Questions. Each question carries 2marks.** **5Q x 2M=10M**

| | | | | |
|---|---|---|---|---|
| **1** | List the three important flows in a supply chain. | **2 Marks** | **L1** | **CO1** |
| **2** | What is meant by an efficient supply chain? Give a real life example for the same. | **2 Marks** | **L2** | **CO1** |
| **3** | Name any four elements of hard infrastructure used in industrial or supply chain systems. | **2 Marks** | **L1** | **CO2** |
| **4** | Give reasons to justify the importance of the distribution network in business operations. | **2 Marks** | **L2** | **CO2** |
| **5** | Compare quantitative and qualitative forecasting techniques. | **2 Marks** | **L2** | **CO3** |

## Part B

**Answer the Questions.** **Total Marks 40M**

| | | | | | |
|---|---|---|---|---|---|
| **6.** | **a.** | With reference to a manufacturing industry of your choice, describe the stages involved in its supply chain. Support your answer with a suitable diagram. | **10 Marks** | **L2** | **CO1** |
| | | **Or** | | | |
| **7.** | **a.** | Discuss the significance of the Push–Pull concept in supply chain architecture. Support your explanation with a neat diagram. | **10 Marks** | **L2** | **CO1** |

<table>
<tr><td>8.</td><td>a.</td><td>Supply chain management requires decision-making at multiple levels. Elaborate on the various decision phases in Supply Chain Management.</td><td>10 Marks</td><td>L2</td><td>CO1</td></tr>
<tr><td colspan="6">Or</td></tr>
<tr><td>9.</td><td>a.</td><td>Explain the major drivers of supply chain performance and discuss how their alignment leads to supply chain efficiency or responsiveness.</td><td>10 Marks</td><td>L2</td><td>CO1</td></tr>
<tr><td>10.</td><td>a.</td><td>Apply your knowledge of distribution network designs to real-world business contexts. With the help of neat diagrams, explain the operation of the following distribution network structures and connect each to a suitable real-world industry or company example:<br>(i) Manufacturer storage with direct shipping<br>(ii) Distributor storage with carrier delivery</td><td>10 Marks</td><td>L3</td><td>CO2</td></tr>
<tr><td colspan="6">Or</td></tr>
<tr><td>11.</td><td>a.</td><td>Assume you are a supply chain manager for a newly established firm. Apply your understanding of supply chain network design to identify and explain the key factors you would consider while designing an effective supply chain network for the firm.</td><td>10 Marks</td><td>L3</td><td>CO2</td></tr>
<tr><td>12.</td><td>a.</td><td>Apply your understanding of forecasting to describe different techniques and explain how they support real-world business planning.</td><td>10 Marks</td><td>L3</td><td>CO3</td></tr>
<tr><td colspan="6">Or</td></tr>
<tr><td>13.</td><td>a.</td><td>The monthly sales details of a consumer electronics product ‘S10’ (Smart LED Television) manufactured by a company for the past five months are given below::
<table>
<tr><th>Oct 2025</th><th>Nov 2025</th><th>Dec 2025</th><th>Jan 2026</th><th>Feb 2026</th></tr>
<tr><td>9,540</td><td>8,860</td><td>9,125</td><td>10,342</td><td>9,896</td></tr>
</table>
Based on the above data:<br>Estimate the demand for March 2026 using the Moving Average method, and the Exponential Smoothing method (assume smoothing constant $\alpha$ =0.3).<br>The actual sales realized in March 2026 were 10,720 units. Calculate the forecast error for both forecasting methods.</td><td>10 Marks</td><td>L3</td><td>CO3</td></tr>
</table>