


<b>Name:</b>	
<b>Enrolment No:</b>	

**UPES**  
**End Semester Examination, May 2024**

<b>Course: Demand Planning &amp; Forecasting</b>	<b>Semester: IV</b>
<b>Program: BBA LM</b>	<b>Time: 03 hrs.</b>
<b>Course Code: LSCM2008</b>	<b>Max. Marks: 100</b>

**SECTION A**  
**10Qx2M=20Marks**

S. No.	Attempt all questions in this section	Marks	CO
Q 1	<b>State True or False</b>		
1.1	Long-term demand forecasting considers daily sales projections.	2	CO1
1.2	The Delphi Method is a qualitative method of demand forecasting.	2	CO1
1.3	Time series analysis is the best-suited demand forecasting method for new product introductions.	2	CO1
1.4	Demand forecasting through time series analysis primarily relies on expert opinions and judgments.	2	CO1
1.5	A common challenge in demand forecasting is ignoring external factors that can affect demand.	2	CO1
1.6	The Delphi method involves asking a group of experts to independently provide their judgments and then aggregating their responses for qualitative forecasting.	2	CO1
1.7	Market research for qualitative forecasting typically collects historical sales data.	2	CO1
1.8	Focus groups are a qualitative forecasting method particularly useful for predicting the demand for new, innovative products.	2	CO1
1.9	Seasonality in demand forecasting refers to fluctuations in demand that occur at regular intervals.	2	CO1
1.10	In quantitative forecasting, forecast error represents the range of possible outcomes in a scenario analysis.	2	CO1

**SECTION B**  
**4Qx5M= 20 Marks**

Q 2	<b>Attempt all questions in this section:</b>		
2.1	Discuss the different types of forecasting errors.	5	CO2
2.2	Define market intelligence and explain its significance in crafting successful e-commerce strategies.	5	CO2
2.3	Write down the steps and characteristics of successful forecasting.	5	CO2
2.4	Explain the concept of naive forecasting and describe how it could be applied within the fast-food industry to predict sales trends.	5	CO2

**SECTION-C**  
**3Qx10M=30 Marks**

Q 3	<b>Attempt all questions in this section:</b>																						
3.1	Qualitative forecasting methods should be used only as a last resort. Agree or disagree? Comment.	<b>10</b>	<b>CO3</b>																				
3.2	<p>The monthly demand for units manufactured by the Acme Rocket Company has been as follows:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Month</th> <th>Units</th> <th>Months</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>May</td> <td>100</td> <td>September</td> <td>105</td> </tr> <tr> <td>June</td> <td>80</td> <td>October</td> <td>110</td> </tr> <tr> <td>July</td> <td>110</td> <td>November</td> <td>125</td> </tr> <tr> <td>August</td> <td>115</td> <td>December</td> <td>120</td> </tr> </tbody> </table> <p>a. Use the exponential smoothing method to forecast the number of units for June to January. The initial forecast for May was 105 units; <math>\alpha = 0.2</math>.</p> <p>b. Calculate the absolute percentage error for each month from June through December and the MAD and MAPE of forecast error as of the end of December.</p>	Month	Units	Months	Units	May	100	September	105	June	80	October	110	July	110	November	125	August	115	December	120	<b>10</b>	<b>CO3</b>
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3.3	What is the primary difference between a time-series model and an associative model?	<b>10</b>	<b>CO3</b>																				

**SECTION-D**  
**2Qx15M= 30 Marks**

Q4	<b>Attempt all questions in this section:</b>																						
4.1	What is a customer-generated forecast? What are the metrics (factors) to develop a customer-generated forecast?	<b>15</b>	<b>CO4</b>																				
4.2	<p>The Monthly Demand for units manufactured by the Acme Rocket Company has been as follows:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Month</th> <th>Units</th> <th>Month</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>May</td> <td>100</td> <td>September</td> <td>105</td> </tr> <tr> <td>June</td> <td>80</td> <td>October</td> <td>110</td> </tr> <tr> <td>July</td> <td>110</td> <td>November</td> <td>125</td> </tr> <tr> <td>August</td> <td>115</td> <td>December</td> <td>120</td> </tr> </tbody> </table> <p>a) Use the exponential smoothing method to forecast the number of units for June to January. The initial forecast for May was 105 units; <math>a = 0.2</math>.</p> <p>b) Calculate the absolute percentage error for each month from June through December and the MAD and MAPE of forecast error as of the end of December.</p>	Month	Units	Month	Units	May	100	September	105	June	80	October	110	July	110	November	125	August	115	December	120	<b>15</b>	<b>CO4</b>
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