



Name: Enrolment No:	
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UPES

End Semester Examination, December 2023

Course: Demand Forecasting and Production Planning
Program: BBA OM_INT. BBA-MBA
Course Code: LSCM3017

Semester: V
Time: 03 hrs.
Max. Marks: 100

Instructions: As per sections

SECTION A
10Qx2M=20Marks

S. No.	Attempt all questions in this section	Marks	CO
Q 1	Multiple choice questions:		
1.1	What is demand forecasting? A) Estimating past customer demand for a product or service. B) Predicting future customer demand for a product or service. C) Analyzing current customer preferences for a product or service. D) Calculating the production cost of a product or service.	2	CO1
1.2	Which of the following is a qualitative method of demand forecasting? A) Moving Average Method B) Exponential Smoothing C) Delphi Method D) Regression Analysis	2	CO1
1.3	Time series analysis in demand forecasting is primarily based on: A) Expert opinions and judgments. B) Historical data and patterns. C) Causal relationships between variables. D) Market research and surveys.	2	CO1
1.4	Which demand forecasting method is best suited for new product introductions? A) Time series analysis B) Causal modeling C) Qualitative methods D) Moving average	2	CO1
1.5	Which of the following is NOT a qualitative forecasting method? A) Delphi method B) Time series analysis C) Market research D) Expert judgment	2	CO1
1.6	Which qualitative forecasting technique involves asking a group of experts to independently provide their judgments and then aggregating their responses? A) Market research	2	CO1

	B) Time series analysis C) Delphi method D) Regression analysis		
1.7	Which qualitative forecasting method is particularly useful for predicting the demand for new, innovative products? A) Expert judgment B) Focus groups C) Time series analysis D) Exponential smoothing	2	CO1
1.8	When using market research for qualitative forecasting, what type of data is typically collected? A) Historical sales data B) Expert opinions C) Customer preferences and behavior D) Economic indicators	2	CO1
1.9	Which of the following is a commonly used quantitative forecasting method for time series data that gives more weight to recent observations? A) Exponential Smoothing B) Delphi Method C) Focus Groups D) Scenario Analysis	2	CO1
1.10	When should a business use a quantitative forecasting approach instead of a qualitative one? A) When there is limited historical data available. B) When the business needs expert opinions. C) When the forecast must consider market research. D) When the data exhibits clear patterns and trends.	2	CO1
SECTION B 4Qx5M= 20 Marks			
Q 2	Attempt any four of the following.		
2.1	Explain the concept of seasonality in demand forecasting.	5	CO2
2.2	What do you understand by market intelligence? Illustrates with example.	5	CO2
2.3	What do you understand by CPFR?	5	CO2
2.4	What is the naive forecasting method, and how is it defined in the context of predictive analysis?	5	CO2
2.5	Write short notes on MRP and ERP	5	CO2
SECTION-C 3Qx10M=30 Marks			
Q 3	Attempt all questions in this section:		
3.1	Define demand forecasting and explain its significance in the business world. Provide examples of industries where demand forecasting plays a crucial role.	10	CO3

3.2	In January, a car dealer predicted February demand for 142 Ford Mustangs. The actual February demand was 153 autos. Using a smoothing constant chosen by the management of $\alpha = 0.20$, the dealer wants to forecast March demand using the exponential smoothing model.	10	CO3																
3.3	<p>Daily demand for marigold flowers at a large garden store is shown below. Compute:</p> <p>a. A three-period moving average for each period.</p> <p>b. A five-period moving average for each period.</p> <table border="1" data-bbox="228 485 1170 789"> <thead> <tr> <th>Period</th> <th>Demand</th> </tr> </thead> <tbody> <tr><td>1</td><td>85</td></tr> <tr><td>2</td><td>92</td></tr> <tr><td>3</td><td>71</td></tr> <tr><td>4</td><td>97</td></tr> <tr><td>5</td><td>93</td></tr> <tr><td>6</td><td>82</td></tr> <tr><td>7</td><td>89</td></tr> </tbody> </table> <p style="text-align: center;">OR</p> <p>Describe the uses of qualitative, time-series, and causal forecasts.</p>	Period	Demand	1	85	2	92	3	71	4	97	5	93	6	82	7	89	10	CO3
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SECTION-D 2Qx15M= 30 Marks																			
Q4	Attempt all questions in this section:																		
4.1	Define micro and macro market intelligence. Also, compare them.	15	CO4																
4.2	<p>What is a customer-generated forecast? What are the metrics (factors) to develop a customer-generated forecast?</p> <p style="text-align: center;">OR</p> <p>Cengiz Haksever runs an Istanbul high-end jewelry shop. He advertises weekly in local Turkish newspapers and is thinking of increasing his ad budget. Before doing so, he decides to evaluate the past effectiveness of these ads. Five weeks are sampled, and the data are shown in the table below:</p> <table border="1" data-bbox="228 1514 1045 1745"> <thead> <tr> <th>Sales (1,000s USD)</th> <th>Ad Budget that week (100s USD)</th> </tr> </thead> <tbody> <tr><td>11</td><td>5</td></tr> <tr><td>6</td><td>3</td></tr> <tr><td>10</td><td>7</td></tr> <tr><td>6</td><td>2</td></tr> <tr><td>12</td><td>8</td></tr> </tbody> </table> <p>Develop a regression model to help Cengiz evaluate his advertising.</p>	Sales (1,000s USD)	Ad Budget that week (100s USD)	11	5	6	3	10	7	6	2	12	8	15	CO4				
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