

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: MBA
BRANCH: MBA**

**SEMESTER : IV
SESSION : SP/2025**

SUBJECT: MT552 MARKETING ANALYTICS

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q.1(a)	Explain how big data has transformed marketing decision-making. Support your answer with relevant examples from the industry.	[5] 1	1
Q.1(b)	What are the benefits of using Excel for marketing analytics? Differentiate between slicing and dicing in Pivot Tables with examples.	[5] 1	2
Q.2(a)	Estimate the demand curve using linear regression. Determine the optimal price to maximize revenue. Explain elasticity's impact on pricing.	[5] 2	2
Q.2(b)	Explain the concept of price bundling. How can it be used to increase overall profitability? Compare pure bundling and mixed bundling with examples.	[5] 2	2
Q.3(a)	A company's monthly sales (in ₹) for the past 8 months are as follows:	[5] 3	4
	Month Sales (₹)		
	Jan 120		
	Feb 135		
	Mar 150		
	Apr 160		
	May 170		
	Jun 175		
	Jul 180		
	Aug 190		
Q.3(b)	Fit a simple linear regression line to forecast sales. Estimate sales for September. Discuss the difference between trend and seasonality in time series forecasting. How does the Ratio-to-Moving-Average method help in isolating seasonality?	[5] 3	3
Q.4(a)	Define Conjoint Analysis. How does it help in understanding customer preferences?	[5] 4	2
Q.4(b)	A company earns an average annual profit of ₹1,200 per customer. The customer retention rate is 70%, and the discount rate is 10%. Calculate the Customer Lifetime Value (CLV). Explain what the result implies for customer relationship strategy.	[5] 4	4
Q.5(a)	Discuss the key techniques used in Advertising and Promotion Analytics. How can businesses evaluate the effectiveness of an ad campaign using these techniques?	[5] 5	3
Q.5(b)	What is Lift in Market Basket Analysis? Why is it more informative than support or confidence alone when identifying product associations? Give an example.	[5] 5	2

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