

VPM's
DR VN BRIMS, Thane
Programme: MMS (2023-25)
Third Semester Regular Examination December 2024

Course Name:	Marketing Analytics	Course Code	M-311
Roll No.		Marks	60
Total No. of Questions	6	Duration	3 Hours
Total No. of printed pages	3	Date	10-12-2024

Course Outcome Statements:

CO1: Recall key concepts related to marketing analytics.

CO2: Explain the financial implications of various marketing strategies and the significance of metrics like Customer Lifetime Value (CLTV).

CO3: Identify appropriate statistical techniques (e.g., regression, ANOVA) and apply them in practical case studies to analyze marketing data.

CO4: Examine descriptive and predictive analytics methods, including clustering and market basket analysis, to derive actionable insights.

CO5: Evaluate the effectiveness of marketing strategies through financial feasibility analysis and social media marketing analytics.

CO6: Design a comprehensive marketing analytics framework that incorporates digital and social media insights for real-world application.

Instructions: -

Q. No 1 (All Questions are Compulsory)

Marks

BL

CO

Q. No.	Questions	Marks	BL	CO
Q. 1	Case/Case-let Study			
	In the competitive landscape of food products, understanding consumer preferences is crucial for successful product development and marketing strategies. This case study explores the findings of a multiple regression analysis conducted to assess how three key factors—Nutritional Value, Taste, and Preservation Quality—affect consumer preference for a specific food product. The analysis aims to provide insights that can guide food companies in enhancing their offerings to meet consumer demands. The study utilized a sample of 40 observations to perform a multiple regression analysis using Excel. The primary objective was to quantify the relationship between consumer preference and the identified factors. The results of the analysis are presented in three main tables: Regression Statistics, ANOVA, and Coefficients.			

<i>Regression Statistics</i>	
Multiple R	0.927517
R Square	0.860287
Adjusted R Square	0.848645
Standard Error	0.699212
Observations	40

Table 1

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	108.3747	36.1249	73.8906	0.00
Residual	36	17.6003	0.488897		
Total	39	125.975			

Table 2

	<i>Standard</i>			
	<i>Coefficients</i>	<i>Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.732929	0.300923	2.435601	0.019948
Nutrition Value	0.294658	0.102849	2.864947	0.00692
Taste	0.170457	0.103021	1.65459	0.106702
Preservation Quality	0.548192	0.117648	4.659579	0.00

Table 3

	a.	Based on the regression analysis results, examine the relative influence of each factor (Nutritional Value, Taste, and Preservation Quality) on consumer preference. Provide a detailed breakdown of the statistical significance of each variable as indicated by their p-values.	6	Level 4	CO4
	b.	Critically assess the implications of the findings for food product development. Considering the significant influence of Nutritional Value and Preservation Quality on consumer preference, what recommendations would you propose for a food company looking to enhance its product offerings? Justify your recommendations based on the statistical evidence provided in the analysis, and discuss potential challenges the company may face in implementing these changes.	6	Level 5	CO5
Q. 2		Answer Any one from the following.			
	a.	Evaluate the effectiveness of key performance indicators (KPIs) in measuring the success of a digital marketing campaign. Justify your assessment by comparing at least two KPIs and their impact on achieving campaign objectives.	6	Level 5	CO5
	b.	Evaluate the role of the Chi-Square Test in verifying the independence of variables in market research studies. Discuss its advantages and potential drawbacks.	6	Level 5	CO5

Q. 3		Answer Any one from the following.			
	a.	Analyze the impact of the time period selected for a moving average on the accuracy of demand forecasting. How does varying the period affect results?	6	Level 4	CO4
	b.	Distinguish between exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). How does each approach contribute to understanding data structure?	6	Level 4	CO4
Q. 4		Answer Any two from the following.			
	a.	Utilizing the CLTV data, how would you decide which group of customers to target with a special discount offer?	6	Level 3	CO3
	b.	Build a conjoint analysis model to analyze customer preferences for a new service package. What attributes would you include in the analysis, and how would you interpret the results?	6	Level 3	CO3
	c.	Develop a strategy based on margin analysis to increase profitability for a company that is experiencing low profit margins. What actions would you recommend based on the cost structure and pricing?	6	Level 3	CO3
Q. 5		Answer Any two from the following.			
	a.	Explain how Google Analytics tracks website traffic and user behavior. How does it differentiate between direct, organic, and referral traffic sources?	6	Level 2	CO2
	b.	Describe how conjoint analysis helps businesses understand consumer preferences. What role do different attributes (e.g., price, features, brand) play in determining customer choices?	6	Level 2	CO2
	c.	Explain how market basket analysis identifies patterns in customer purchasing behaviour. How do association rules like "If a customer buys X, they are likely to buy Y" work in this context?	6	Level 2	CO2
Q. 6		Answer Any two from the following.			
	a.	What is the primary goal of cluster analysis in data analysis?	6	Level 1	CO1
	b.	What is the main purpose of discriminant analysis in statistical modelling?	6	Level 1	CO1
	c.	What is the meaning of the term "margin of safety" in margin analysis?	6	Level 1	CO1