JAIPURIA INSTITUTE OF MANAGEMENT
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JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

FOURTH TRIMESTER (Batch 2023-25)

END TERM EXAMINATIONS, SEPTEMBER 2024

Course Name	MARKETING ANALYTICS	Course Code	X0125 (113)
Max. Time	**2 hours**	Max. Marks	**40 MM**

INSTRUCTIONS: Submit your answers in hard copy/ answer sheet provided to you.

1. One of the uses of conjoint analysis is being able to understand how customers make their decisions. It allows you to answer questions such as: When a customer is presented with products composed of several features, how do they prioritise? Which features do they see as the 'must haves' and which as the 'nice to haves'? Are there features they are willing to sacrifice? Which feature drives purchase and is linked to the price of the product.

   A conjoint study was conducted by a firm to determine the role that five attributes play in influencing a consumer's preference for a vacuum cleaner. The five attributes and their levels are as follows:

   Package design (either A, B or C)
   - Brand (1,2 or3)
   - Price (Rs 300, Rs 400, Rs 500)
   - Did "Good Housekeeping" magazine approve product?
   - Is product guaranteed?

   The best prediction for the product is as follows:
   Predicted Rank = 4.833 - 4.5*A + 3.5*B - 1.5*Brand1 - 2*Brand2 + 7.667*(Rs 300 Price) + 4.83 *(Rs 400 Price) + 1.5 *(Approved?) + 4.5 *(Guarantee)

   a. Analyze the equation **to** draw strategic insights for the firm's product manager. How can these insights inform a proactive marketing strategy? **(8 marks)**

   □

   b. Synthesize the information from the model to determine the key factors driving consumer preferences, and suggest how the product manager can leverage these factors to enhance market positioning and target specific customer segments. **(7 marks)**

2. In a consumer research, conducted by a fast food joint, the following information was obtained after data analysis. There are two types of food (say 1 & 2) and two types of condiments (say A & B)

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	79.04103	2.927777	26.99694	5.22E-41	73.21108	84.87098	73.21108	84.87098
Food	0.282645	3.380706	0.083605	0.933587	-6.4492	7.01449	-6.4492	7.01449
Condiment	-3.72505	3.380706	-1.10186	0.273956	-10.4569	3.006792	-10.4569	3.006792

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	93.0481	1.119533	83.11334	2.28E-76	90.81835	95.27784	90.81835	95.27784
Food	-27.7315	1.583258	-17.5155	2.11E-28	-30.8848	-24.5782	-30.8848	-24.5782
Condiment	-31.7392	1.583258	-20.0468	4.51E-32	-34.8925	-28.5859	-34.8925	-28.5859
FOODXCONDIMENT	56.02826	2.239065	25.02306	1.95E-38	51.56877	60.48774	51.56877	60.48774

Critically examine the data analysis output. **(12 marks)**

3. In the customer management lifecycle, customer churn refers to a decision made by the customer about ending the business relationship. It is also referred as loss of clients or customers. Customer loyalty and customer churn always add up to 100%. If a firm has a 60% of loyalty rate, then their loss or churn rate of customers is 40%. As per 80/20 customer profitability rule, 20% of customers are generating 80% of revenue. So, it is very important to predict the users likely to churn from business relationship and the factors affecting the customer decisions

   A marketing manager is interested in finding as to how different variables affect customers' loyalty. The outcome variable, loyal/not loyal is binary.

   a. Which type of regression model is appropriate for this situation and why?

   b. The manager finds the maximum likelihood estimates of slope to be (0.1281) & intercept as (-5.661). What is the chance that a 44 year old will be a loyal customer? (exp (-0.0246)=0.9757) & exp(0.0246)=1.0249) **(5+8=13 marks)**