

JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA
PGDM (M)
THIRD TRIMESTER (Batch 2017-19)
SPECIAL RE-APPEAR END TERM EXAMINATIONS, June- 2018

Course Name	Marketing Analytics	Course Code	MKT305
Max. Time	2 hours	Max. Marks	40 MM

INSTRUCTIONS: All questions are compulsory

Q.1 A marketing analytics consultancy firm conducted a study for a herbal toothpaste manufacturing company and found that the sales of the company depends linearly on number of salespersons, money spent on advertising, number of retail outlets, product varieties offered, number of competitors and number of customers. On regression analysis, the following results were obtained

ANOVA				
	<i>Df</i>	<i>SS</i>	<i>Significance F</i>	
Regression	6	6399.194	0.000	
Residual	8	323.206		
Total	14	6722.400		

	<i>Coefficients</i>	<i>Standard Error</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.003	31.103	-71.728	71.721
Salespersons	1.026	0.927	-1.111	3.163
advertising amount	0.875	1.274	-2.063	3.812
Variety	1.532	0.602	0.144	2.920
Competitors	-1.490	2.169	-6.491	3.511
retail outlets	0.247	2.245	-4.930	5.424
Customers	0.172	0.270	-0.452	0.795

<i>Observation</i>	<i>Predicted Y</i>	<i>Residuals</i>
1	74.191	6.809
2	25.080	-2.080
3	23.458	-5.458
4	4.177	3.823
5	15.731	0.269
6	-0.680	4.680
7	24.175	4.825
8	25.964	-3.964
9	25.246	-10.246
10	3.580	2.420

Suggest an appropriate marketing strategy for the company based upon this data analysis.

(8 Marks)

Q.2 Adding interaction terms to a regression model can greatly expand understanding of the relationships among the variables in the model and allows more hypotheses to be tested.

A marketing research firm is interested in finding the cost of employees to the firm across the country. After analyzing the data the following equations were obtained. Explain the implications of these equations to the marketing research firm:

- a. Predicted Wage = $10.2 + 1.3\text{Northeast} - 0.9\text{Midwest} - 1.7\text{South}$
- b. Predicted Wage = $12.7 + 2.1\text{Education} - 1.8\text{Female}$
- c. Predicted Wage = $0.076 + 0.88\text{Education} - 4.28\text{Female} + 0.16\text{Female}*\text{Education}$

(3+3+ 4=10 marks)

Q.3 Big data analytics is one of the big trends in banking. The majority of banking providers surveyed by The Financial Brand say it is a top priority for them in the coming year. But financial institutions face some unique challenges. For starters, the senior marketer is not usually considered part of the C-suite. It's simply a reflection of the responsibilities marketers traditionally have had at smaller banks and credit unions. Their activities — for the most part — have focused on things like sales support, event planning, branch signage, brochures, updating the website and maybe social media.

These senior marketing managers are now being tasked with designing, building and implementing sophisticated marketing analytics platforms. This will involve some major shifts in how they — and everyone around them — view their role. Discuss any four changes involved with this transformation that senior marketers can look forward to when implementing a marketing analytics strategy at their institution.

(10 marks)

CASE STUDY

A forecast of total-market demand won't guarantee a successful strategy. By gauging market demand explicitly, marketing managers have a better chance of controlling their company's destiny by devising an effective strategy. Market forecasting is only the first stage in creating such strategy for Cadila. Cadila was founded in 1952 by Ramanbhai Patel (1925–2001), formerly a lecturer in the L.M. College of Pharmacy, and his business partner Indravadan Modi. It evolved over the next four decades into an established pharmaceutical company. In 1995 the Patel and Modi families split, with the Modi family's share being moved into a new company called Cadila Pharmaceuticals Ltd. and Cadila Healthcare became the Patel family's holding company. In 2015 the company acquired another Indian pharmaceutical company called German Remedies. In 2010, Cadila Healthcare received a Wellcome Trust Award under the "R&D for Affordable Healthcare in India" initiative.

From nine pharmaceutical production operations in India as well as a Zydus Cadila develops and manufactures a large range of pharmaceuticals as well as diagnostics, herbal products, skin care products and other OTC products. Starting from late 2015, having concluded a voluntary license agreement with Gilead, the

company also produces the generics for hepatitis C treatment (i.e. sofosbivur, distributed under the brand name SoviHep). The company makes active pharmaceutical ingredients at three sites in India:

Cadila is interested in forecasting the impact of sales representatives and territories on its sales.

	Rep 1	Rep 2	Rep 3	Rep 4
Dist 1	1	3	10	12
Dist 2	17	12	16	14
Dist 3	17	21	22	25
Dist 4	20	10	17	23
Dist 5	22	21	37	32

By analyzing the past data as shown above, the following results were obtained

ANOVA					
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Rows	1011.3	4	252.825	15.87598	9.74E-05
Columns	216.4	3	72.13333	4.529566	0.024095
Error	191.1	12	15.925		
Total	1418.8	19			

Q.4 (based upon case study)

- Predict the sales for representative 2 & district 4, representative 1 & district 3, representative 3 & district 1.
- What will be predicted sales in part a of this question. if p value of rows is 0.87
- What will be predicted sales in part a of this question, if p value of columns is 0.76
- What will be different predicted sales intervals at different levels. **(3X4= 12 marks)**