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| **C:\Users\ADMIN\Desktop\j.png** | **JAIPURIA INSTITUE OF MANAGEMENT, INDORE**  Post Graduate Diploma in Management |
| **Course Title: Marketing Analytics, (Course Code: 40125)**  **End-Term Examination, Term - V (January, 2024)** | |
| **Time Duration : 2 Hours Total Marks: 40** | |

***General Instructions*:**

1. *Answer the questions as directed. The break-up of the marks is given wherever necessary.*
2. *Marks against each question is indicated to its right.*
3. *Answer all the questions of a ‘Section/Question’ at one place in continuation.*
4. *Answers should be brief and to the point.*
5. *Do not write on the question paper except your roll number.*

**SECTION - A**

**Q1.** The Q.1 datasheet contains data for weeks during 2009–2011 for the unit sales of 3M tape, price charged, whether an ad campaign was run that week (1 = ad campaign), and whether the product was displayed on the end of the aisle (1 = end cap).

Use this file to perform the following exercises:

1. Does there appear to be an upward trend in sales?

**(5 Marks)**

**b.** Analyze the nature of the monthly seasonality of tape sales.

**(5 Marks)**

**c.** Does an ad campaign appear to increase sales?

**(5 Marks)**

**d.** Does placing the tape in an end-cap display appear to increase sales?

**(5 Marks)**

**Q2.** The Q.2 datasheet provides the following information for 392 different car models:

* Cylinders
* Displacement
* Horsepower
* Weight
* Acceleration
* Miles per gallon (MPG)

1. Determine an equation that can predict MPG.

**(5 Marks)**

1. Why do you think all the independent variables are not significant?

**(5 Marks)**

**Q3.** The Q.3 datasheet contains Rank, School, Average undergrad GPA, Average GMAT score, Acceptance rate, Average starting salary, and bonus Out-of-state tuition and fees for 54 top MBA programs.

**a)** Use this data to perform a cluster analysis to figure out the segments.

**(5 Marks)**

**b)** How will you interpret the characteristics of each of the segments?

**(5 Marks)**