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**JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA**

**PGDM / PGDM (M) / PGDM (SM)**

**SECOND TRIMESTER (Batch 2023-25)**

**END TERM EXAMINATIONS, JANUARY 2024**

**Reappear**

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| Course Name | **Essentials of Business Analytics** | Course Code | **20801** |
| Max. Time | **2 hours** | Max. Marks | **40 MM** |

INSTRUCTIONS: **(Read them very carefully)**

1. This is an **open book** examination. You may refer to your text book.
2. There are two sections in the question paper. Both are compulsory to attempt.
3. Kindly upload a single Excel file(workbook) answering the following questions in separate worksheets and saved as (\*.xlsx)
4. Write your analysis in the same worksheet.
5. Name the worksheet with the question number(example: If the worksheet is for answering the question number 4, name it as Q\_4)
6. Save the excel with your name as Name\_RollNo\_EBA (example: Aayushi\_Kalra\_25\_EBA)
7. Kindly go through data\_dictionary for variable description.
8. Marks for each question are written in bracket at the end of each question.

**Part - A**

**Read the case below and answer the ques 1-3**

**Acme Corporation** sells office supplies to businesses through various channels. They're eager to understand customer patterns across these channels and improve their sales approach. Data and its description is provided in the file AC\_sales.xlsx.

1. Summarize and interpret the behavior of customers by generating a crosstab for the sales mount for different product categories. **(5 marks)**
2. Explore the relationship between the number of contacts and sales amount numerically and graphically.**(5marks)**
3. The brand manager at the **Acme Corporation** was interested in understanding whether the channel makes any significant impact on the average amount sales. Test for α = 0.05. **(10 marks)**

**Part – B**

1. A business school hosts a quarterly Business Analytics workshop. Each workshop features two seasoned and renowned data scientists from the industry. These experts receive free passes for the workshop, two each. Other interested participants can register for $150 per person. All attendees receive a workshop kit, lunch and licence key for the tool used during workshop.

The following are the costs associated with hosting this workshop.

Venue rental: $150

Registration processing: $7.5 per person

Data Scientists compensation: 2 @$750 = $1,500

Kit: $3.50 per person

Lunch: $ 5 per person

Licence key for the tool: $ 2.5 per person

1. Build a spreadsheet model that calculates a profit or loss based on the number of non member registrants. Compare the model if company has different production levels. **(15 marks)**
2. Make use of goal seek model to find the number of non-member registrants that will make the workshop break even. **(5 marks)**