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| **C:\Users\ADMIN\Desktop\j.png** | **JAIPURIA INSTITUE OF MANAGEMENT, INDORE**Post Graduate Diploma in Management |
| **Course Title: Business Intelligence for Decision Making, (Course Code: 40823)****Re-End-Term Examination, Term - IV (October, 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 are indicated to its right.*
3. *For question 1 (SQL Questions), please paste the query in the MS Word file and write the analysis accordingly. The analysis of PowerBI visualization will also be written in the same MS Word file in which SQL queries are pasted.*
4. *Please save the MS Word and PowerBI Dashboard with your Full Enrollment NO.*
5. *Two files need to be uploaded in total:*
6. *MS Word file with SQL query screenshots with analysis(Q1) and PowerBI Visualization analysis(Q2).*
7. *PowerBI Dashboard file.*
8. *Do not write on the question paper except your roll number.*

Q1. Two CSV files, **Bikes** and **details\_bikes**, will be provided; all the queries will be run based on these two files on the MySQL workbench. The second-hand bike company MySpeed has collected data about the availability of second-hand bikes of different brands, models, and availability in different cities. Detailed data have been collected on various parameters like Price, Kilometers driven, Age, and Power. To get a fair idea about the second bike which bike is more available for second-hand sale and similarly, what are the parameters customers are more focused on while purchasing the second-hand bike? **7X3 marks**

**The Column description is mentioned below:**

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| **Field** | **Field Information** | **Description** |
| Vehicle\_ID | Vehicle\_ID | Unique ID of each vehicle |
| Bike\_name | Bike\_name | Name of the Model |
| City | City | Available city |
| Owner | Owner | This bike is the first owner or the second owner |
| Brand | Brand | The brand of the bike |
| Price | Price | The price of the second-hand bike that is available |
| Kms\_drive | Kilometres driven | Number of kilometres bike is already run |
| Age | Age | How old is the bike? |
| Power | Power | Horsepower of the bike |

**Each part carries 3 marks**

1. Extract available bikes in different cities (number of bikes) and comment on which city is more active in terms of available second-hand bikes.
2. Summarize which brand is selling a greater number of models.
3. Derive the average price (decimal point 2) of bikes available in different brands. Comment.
4. Which brand has more options for getting bikes of less number of years run and which city is more available? Comment if you are in Ahmedabad and which brand of bikes are more available to you.
5. Comment on the deciding parameter by customers of bikes is horsepower or sold price. (availability of bikes based on both the parameters).
6. Explain what customers are purchasing based on owner type (First-hand owner or second-hand owner).
7. Analyse the overall second-hand bike industry based on the above queries and data provided in both the CSV files, is it is same in metro and non-metro cities?

Q2. As per the above-mentioned used bikes data, prepare a dashboard to analyze the data and explain the overall second-hand bike market in different metro and non-metro cities of the country  **each part carries 3 marks excluding 1 mark for data preparation (18+1=19)**

The data preparation before going to work on PowerBI visuals- **1 mark**

1. Explain which brand is more available, and explain city-wise details.
2. Analyse customers are focusing on which parameters while purchasing second-hand bikes like age, power, owner type, and price. Comment as per the model
3. Second bikes are more popular in terms of purchasing luxury high-segment bikes or customers purchase routine brands of bikes as well. Comment.
4. Analyse customers who are purchasing second-owner bikes as well as which city people are purchasing more of the second-owner bikes, Comment on the reasons for the same.
5. Compare two brands Royal Enfield and KTM based on all the available parameters.
6. Design a visual that helps the new organization that would like to open the second-hand bike re-sale organization in Surat.