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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: MKT 50125)****End-Term Examination, Term - V (January, 2023)**  |
|  **Time Duration : 2 Hours Total Marks: 40** |

***General Instructions*:**

1. *You are required to use MS-Excel and/or SPSS and/or Rapid Miner to solve the questions.*
2. *Answer to all the questions on the answer sheet provided to you.*
3. *You are also required to save and submit the supporting output file from MS-Excel and/or SPSS and/or Rapid Miner as one zip file.*
4. *Answers should be brief and to the point.*
5. *Do not write on the question paper except your roll number.*

**Q.1.** A furniture cabinet maker produces two types of cabinets that house and hide plasma televisions. The Mission-style cabinet requires $340 in materials and 15 labor hours to produce, and it yields a profit of $910 per cabinet. The Rustic-style cabinet requires $430 in materials and 20 hours to produce, and it yields a profit of $1,200. The firm has a budget of $30,000 to spend on materials. To ensure full employment, the firm wishes to plan to maximize its profit but at the same time to keep all 30 workers fully employed, so all 1,200 available labor hours. (**10 Marks)**

**Q.2** The file ***Healthcaredata.xlsx*** gives the age, party affiliation, and income of 300 people. You are also told whether they favor Ayushcare. Develop a model to predict the chance that a person favors Ayushcare. For each person generate a prediction of whether the person favors Ayushcare. Also analyse the accuracy of your model in terms of its accuracy, sensitivity and specificity.

 (**10 Marks)**

**Q.3**.Use the data provided in ***Airlinedata.xlsx***, and analyse Which airline (Delta or United) has more brand equity on this route? (**10 Marks)**

**Q.4.**Delta wants to optimally design a 9 a.m. flight. The flight will have audio and take six hours. There are 500 potential flyers on this route each day. The plane can seat at most 300 people. Determine the profi t maximizing price, and whether Delta should offer a movie and/or meals on the flight. The only other flight that day is a $350 United 8 a.m., five-hour flight with audio, movies, and no meals. Delta’s cost per person on the flight breaks down as follows:

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| --- | --- |
| Item | Cost Per Person |
|  Fuel | $60  |
| Food | $40  |
| Movie | $15 |

Using the data provided in ***Airlinedata.xlsx*** Help Delta maximize its profit on this flight.

**(10 Marks)**