Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CS3074** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Advanced Data Mining** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain different data and information systems with its applications. | CO1 | **15** |
| b. | What kind of patterns can be mined? | CO1 | **5** |
| **(OR)** | | | | |
| 2. | a. | A data analytics expert was on a process of developing dash boards for the top level management in a company. This functionality may help the administrators of the company to visualize the glimpse of the department’s progress in a single window. He was collecting data from various sources for this task. He was encountered with some missing values across the data. How will the expert handle the missing data? | CO1 | **15** |
| b. | Name the different functions involved in Data Transformation. | CO1 | **5** |
| 3. |  | Assume, You are a technical consultant for a chain of restaurants. The CEO of the company wants to know the current trends, customer reviews, Competitors business patterns and company's growth for the past 5 years. In this case, what will be the different source of data you consider for analysis? | CO2 | **20** |
| **(OR)** | | | | |
| 4. |  | Draw a table and 3-D view of sales data for AllElectronics, according to the dimensions time, item, and location. | CO2 | **20** |
| 5. |  | Elucidate support vector machines with nessesary diagrams. | CO3 | **20** |
| **(OR)** | | | | |
| 6. | a. | Explain K-nearest neighbor classifiers. | CO3 | **10** |
|  | b. | Give details about Ensemble methods. |  |  |
| 7. |  | Explain market basket analysis with the given table.     |  |  |  | | --- | --- | --- | | **Customer** | **Item Purchased** | **Item Purchased** | | 1 | Pizza | Beer | | 2 | Salad | Soda | | 3 | Pizza | Soda | | 4 | Salad | Tea | | CO4 | **20** |
| **(OR)** | | | | |
| 8. |  | Explain decision tree algorithm using the table given below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Outlook | Temperature | Humidity | Wind | Play-tennis | | sunny | hot | high | weak | No | | sunny | hot | high | strong | No | | overcast | hot | high | weak | Yes | | rain | mild | high | weak | Yes | | rain | cool | normal | weak | Yes | | rain | cool | normal | strong | No | | overcast | mild | high | strong | Yes | | sunny | mild | high | weak | No | | sunny | cool | normal | weak | Yes | | rain | mild | normal | weak | Yes | | sunny | mild | normal | strong | Yes | | overcast | hot | normal | weak | Yes | | overcast | cool | normal | strong | Yes | | rain | mild | high | strong | No | | CO4 | **20** |
|  | | **Compulsory:** |  |  |
| 9. |  | Explain market basket analysis with the given table.   |  |  |  | | --- | --- | --- | | **Customer** | **Item Purchased** | **Item Purchased** | | 1 | Pizza | Beer | | 2 | Salad | Soda | | 3 | Pizza | Soda | | 4 | Salad | Tea | | CO4 | **20** |

ALL THE BEST