Roll No. | | | | | | | | | | |

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COER University

END SEMESTER EXAMINATION, EVEN SEM 2022-23

Time : 3 hours
Total Marks : 100
Program Name : M.Tech.(CSE)
Semester : II
Course Name : Data Mining and Warehousing
Course Code : MTCS214

Note: All questions are compulsory. No student is allowed to leave the examination hall before the completion of the time.

Q. No 1	Attempt Any Four Parts. Each Question Carries 5 Marks.	CO	BL
(a)	Define Data mining? Explain data mining uses and applications?	CO 1	1
(b)	Explain the Data Cube Aggregation with example.	CO 1	2
(c)	Explain the role of data pre-processing in data mining.	CO 1	4
(d)	What is the significance of data visualization? Define any two methods to visualize the data.	CO 1	2
(e)	Evaluate the descriptive statistical measures used in data mining.	CO 1	5

Q. No 2	Attempt Any Four Parts. Each Question Carries 5 Marks.	CO	BL
(a)	Define frequent sets, support, confidence, and association rules with an example.	CO 2	2
(b)	Discuss Single-Dimensional Boolean Association Rules from Transactional Databases.	CO 2	2
(c)	Consider the data Set D. The given minimum support is 2, apply Apriori Algorithm on this dataset to find the following: **Transaction ID** — **Items** 100 — A,C,D 200 — B,C,E 300 — A,B,C,E 400 — B,E a) All Frequent item sets in database D using Apriori Algorithm. b) Strong Association rules for database D.	CO 2	3
(d)	Explain Association Analysis to correlation analysis and discuss its one of the techniques with an example.	CO 2	3
(e)	Differentiate between single level with multi-level association rules.	CO 2	3

Q. No 3	Attempt Any Four Parts. Each Question Carries 5 Marks.	CO	BL
(a)	Define classification with an example. What are the different challenges occur during classification process?	CO 3	2
(b)	Describe in detail about Rule based Classification.	CO 3	5
(c)	Define the decision tree induction algorithm with proper example.	CO 3	2
(d)	Define Clustering? Explain about Types of Data in Cluster Analysis?	CO 3	2
(e)	Define confusion matrix with an example. Also discuss precision, recall, accuracy and F1-score performance measures.	CO 3	2

Q. No 4	Attempt Any Two Parts. Each Question Carries 10 Marks.	CO	BL
(a)	Explain the essential steps in a predictive modeling with a case study.	CO 4	4
(b)	Define exploratory data analysis. Also, define the steps involved in exploratory data analysis.	CO 4	2
(c)	What is time series data explain with example? What types of time series data can be mined and what are the real word application of time-series forecasting?	CO 4	2

Q. No 5	Attempt Any Two Parts. Each Question Carries 10 Marks.	CO	BL
(a)	Define Data warehouse? Discuss various Design principles with examples.	CO 5	2
(b)	What is OLAP Define. Also discuss its function and categorization.	CO 5	2
(c)	Define and discuss the data warehousing components to built a data warehouse.	CO 5	3

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