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Sixth Semester B.E. Degree Examination, July/August 2022 Data Mining and Data Warehousing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat diagram, explain a Three – Tier Data Warehouse. (10 Marks)
- b. List and explain Data Warehouse Models. (10 Marks)

OR

- 2 a. With suitable example, explain Star schema , Snow Flake schema , Fact Constellation schema for Multidimensional database. (10 Marks)
- b. Explain OLAP Operations with example. (10 Marks)

Module-2

- 3 a. Explain OLAP Data indexing for Bitmap Index and Join index. (10 Marks)
- b. Differentiate ROLAP , MOLAP and HOLAP Servers. (10 Marks)

OR

- 4 a. Explain Data – preprocessing steps and the challenges faced in Data Mining. (10 Marks)
- b. Briefly explain Similarity and Dissimilarity between the objects. Find the SMC and Jacquard coefficient of Two binary vectors.
 $X = (1, 0, 0, 0, 0, 0, 0, 0, 0, 0)$ $Y = (0, 0, 0, 0, 0, 0, 0, 0, 0, 1)$ (10 Marks)

Module-3

- 5 a. Explain the rule generation in Apriori Algorithm with example. (10 Marks)
- b. Explain the Alternative method for generating frequent itemset. (10 Marks)

OR

- 6 a. Briefly explain FP growth algorithm. (10 Marks)
- b. Explain the objective measure of Interestingness for evaluating association patterns. (10 Marks)

Module-4

- 7 a. With a neat block diagram, explain general approach to solve classification problems with application. (10 Marks)
- b. Explain with example, how to build decision tree using Hunt’s algorithm. (10 Marks)

OR

- 8 a. Explain different method for comparing classifier. (10 Marks)
- b. Explain the rule based classifier with example. (10 Marks)

Module-5

- 9 a. Describe K – means clustering algorithm. What are its limitations? (10 Marks)
- b. With example, explain Agglomerative Hierarchical clustering with example. (10 Marks)

OR

- 10 a. With Time and Space complexity, explain DBSCAN Clustering Algorithm. (10 Marks)
- b. Explain the BRICH Scalable Algorithm. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.