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Sixth Semester B.E. Degree Examination, June/July 2024 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. Differentiate Operational Database system and Data ware house. (08 Marks)
- b. List Data Warehouse characteristics. (04 Marks)
- c. With a neat diagram, explain a Three - Tier Architecture of Data Warehouse. (08 Marks)

OR

- 2 a. Explain the schemas of Multidimensional Data models. (08 Marks)
- b. Explain OLAP Operations (06 Marks)
- c. Differentiate OLAP and OLTP. (06 Marks)

Module-2

- 3 a. What is Data Mining? Explain KDD process in Data Mining. (10 Marks)
- b. What kinds of pattern can be mined? Explain in brief. (10 Marks)

OR

- 4 a. Explain the Data Preprocessing techniques in brief. (10 Marks)
- b. Explain the Dimensionality Reduction with its significance. (10 Marks)

Module-3

- 5 a. Explain the Apriori Algorithm with an example. (10 Marks)
- b. Explain the Frequent Pattern growth algorithm and mention its advantages. (10 Marks)

OR

- 6 a. Explain Alternative methods for generating frequency item sets in brief. (10 Marks)
- b. Explain Evaluation of Association Pattern in brief. (10 Marks)

Module-4

- 7 a. How does Decision tree induction algorithm works? Explain with an example. (10 Marks)
- b. Describe the methods for comparing classifiers. (10 Marks)

OR

- 8 a. Explain Direct methods and Indirect methods of Rule Extraction in brief. (10 Marks)
- b. Explain Nearest Neighbour Classifier. List its characteristics. (10 Marks)

Module-5

- 9 a. Describe K means Clustering algorithm. What are its limitations? (10 Marks)
- b. Explain DBSCAN algorithm with an example. (10 Marks)

OR

- 10 a. Explain the following in brief : (10 Marks)
- i) Density Based Clustering ii) Graph Based Clustering. (10 Marks)
- b. Explain the BRICH Scalable Algorithm. .

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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.