

**322832(22)**

**B. E. (Eighth Semester) Examination,  
Nov.-Dec. 2019**

(New Scheme)

(CSE Branch)

**DATA MINING & WAREHOUSING**

*Time Allowed : Three hours**Maximum Marks : 80**Minimum Pass Marks : 28*

*Note : Attempt all the questions. Part (a) of each question is compulsory. Attempt any **two** parts from (b), (c) and (d) in each question.*

**Unit-I**

1. (a) Define Meta data. 2
- (b) Explain the three-tier data warehouse architecture with diagram. 7

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- (c) What are the basic elements in data warehousing?  
Explain with proper illustrations. 7
- (d) How is data warehouse different from a database?  
How are they similar. 7

### Unit-II

2. (a) List any four data transformation tasks. 2
- (b) Write short note on : (any one)
- (i) Data Extraction 7
- (ii) Data Transformation 7
- (c) Explain the important characteristics of TYPE1, TYPE2 and TYPE 3 change. Also explain important conditions for applying these changes. 7
- (d) Explain star and snowflake schema for representing multidimensional databases along with advantages and disadvantages. 7

### Unit-III

3. (a) Define OLAP. 2
- (b) What are the important guidelines that has been given by Dr. E. F. Codd for OLAP system? 7

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- (c) Draw and explain the architecture of ROLAP and MOLAP models. 7
- (d) How many classes of users are involved in datawarehouse? Explain. 7

### Unit-IV

4. (a) What are the various steps involved in KDD? 2
- (b) Explain decision tree construction with the help of algorithm and example. 7
- (c) Discuss various data mining techniques. 7
- (d) What is clustering? Explain with the help of an algorithm and an example. 7

### Unit-V

5. (a) Define web mining. 2
- (b) Discuss various approaches used in web structure mining. 7
- (c) What are Data Mining Primitives? Describe various primitives for specifying a data mining task. 7
- (d) How are graphical user interfaces designed using DMQL? 7

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