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**BCS 2041** 

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# B. Tech. Examination 2021-22

(Even Semester)

## DATA MINING AND WARE HOUSING

Time: Three Hours

[Maximum Marks: 60

Note: Attempt all questions.

### SECTION-A

- 1. Attempt all parts of the following:
- $8 \times 1 = 8$

- (a) What is fact tables?
- (b) Differentiate between operational and informational data.
- (c) Define data transformation and integration.
- (d) Differentiate between MOLAP and HOLAP.
- (e) Explain association rules.
- (f) What is backup and recovery?

- (g) What is classification?
- (h) Why is data preprocessing required?

#### SECTION-B

- 2. Attempt any two parts of the following:  $6 \times 2 = 12$ 
  - (a) How does a snow flakes schema differ from a STAR schema?
  - (b) What are the various requirements of clustering in data mining?
  - (c) How cure is different from chameleon?
  - (d) Explain with diagram the fact constellation schema.

#### SECTION-C

- **Note:-** Attempt all questions. Attempt any two parts of the following.  $8 \times 5 = 40$ 
  - (a) Explain with a help of a diagram the concept of multi-dimensional modeling and data cubes.
  - (b) Discuss database architecture of parallel processing.
- (c) Define ETL process of data warehouse.

- 4. (a) What are elements of dataware house?
  - (b) Describe a 3-tier data warehousing architecture.
  - (c) Differentiate between mining values, noisy data and inconsistent data.
- 5. (a) List and explain the different characteristics of decision tree induction.
  - (b) Describe the nearest neighbour classification technique.
  - (c) Explain density based method.
- 6. (a) Explain the apriori algorithm for frequent item set generation.
  - (b) Compare OLAP and OLTP system.
  - (c) Define following term:
    - (i) Data compression
    - (ii) Numerosity reduction
    - (iii) Data cube aggregation