**Code: 9A05706** **R09**

B.Tech III Year II Semester (R09) Supplementary Examinations December/January 2015/2016

**DATA WAREHOUSING & DATA MINING**

(Information Technology)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

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1 (a) List and describe any four primitives for specifying a data mining task.
(b) What is meant by data reduction? Explain its techniques.

2 (a) Explain indexing of OLAP data.
(b) Explain the star and snowflake schema in detail with suitable examples.

3 (a) What are the approaches to mining multilevel association rules? Explain.
(b) Write the FP-graph algorithm with example.

4 (a) What is Bayes theorem? Explain about naïve Bayesian classification.
(b) There are four coins a, b, c, d out of which three coins are of equal weight and one coin is heavier. Draw the decision tree to find the heavier coin.

5 Given two objects represented by the tuples (22, 1, 42, 10) and (20, 0, 36, 8).
(a) Compute the Euclidean distance between the objects.
(b) Compute the Manhattan distance between the objects.
(c) Compute the Minkowski distance between the objects, using q = 3.

6 Suppose that a power station stores data regarding power consumption levels by time and by region, in addition to power usage information per customer in each region. Discuss how to solve the following problems in such a time-series database:
(a) Find similar power consumption curve fragments for a given region on Fridays.
(b) Every time a power consumption curve rises sharply, what may happen within the next 20 minutes?
(c) How can we find the most influential features that distinguish a stable power consumption region from an unstable one?

7 (a) State processes involved in mining text and spatial database.
(b) What are three different web mining techniques? Explain with example.

8 (a) Briefly write about data mining applications in financial analysis.
(b) How social media showing its impact on data mining?

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