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MCA552

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Fifth Semester MCA Degree Examination, Dec.08/Jan.09
Data Mining and Warehousing

Time: 3 hrs. Max. Marks:100

Note : ***Answer any FIVE full questions.***

1 a. With a neat diagram, explain 3-TIER Data Warehouse Architecture **(08 Marks)**

b. Consider sales example and explain the following concepts.

i) Star schema.

ii) Snow Flake schema.

iii) Fact Constellation schema. **(12 Marks)**

2 a. Explain how do we relate Data Warehousing and Data Mining? Explain the integrated OLAM and OLAP architecture, with a neat diagram. **(10 Marks)**

b. Discuss in detail Multidimensional DATA MODEL and typical OLAP operations on the model. **(10 Marks)**

3 a. Describe the FIVE primitives for specifying a Data Mining task. **(10 Marks)**

b. Describe why concept hierarchies are useful in Data Mining. Discuss the DMQL syntax for concept hierarchy specification. **(10 Marks)**

4 a. What is Association Rule Mining? Write a priori algorithm for finding frequent item sets. **(10 Marks)**

b. Write and explain the FP-growth algorithm for discovering frequent item sets without candidate generation. **(10 Marks)**

5 a. Find all frequent item sets using a priori and FP-Growth for the given transactional data. Let MIN – SUB = 60% and
MIN – CONF = 80% **(14 Marks)**

T_{ID}	items – bought
T_{100}	{M, O, N, K, E, Y}
T_{200}	{D, O, N, K, E, Y}
T_{300}	{M, A, K, E}
T_{400}	{M, U, C, K, Y}
T_{500}	{C, O, O, K, I, E}

b. Write notes on:

i) ICE BERG Queries.

ii) Support and Confidence in Association Rule Mining. **(06 Marks)**

6 a. Discuss in detail the Bayesian classification methods with suitable examples. **(10 Marks)**

b. Explain the "Hierarchical Clustering using Representation" [CURE] using a suitable example. **(10 Marks)**

7 a. Discuss the K-Medioids partitioning method. **(10 Marks)**

b. Describe the distance based outlier detection technique methods. **(10 Marks)**

8 a. Describe how Data Mining can be used in Retail Industry. **(10 Marks)**

b. Discuss on Trends in Data mining. **(10 Marks)**

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