T.E. Sem VI (Rev) 14 Dec -12
Comp Sub:- DWM

ws-Con-2012
Con. 8161–12. KR–9224

(3 Hours) [Total Marks : 100

Note: 1. Question 1 is compulsory
2. Answer any 4 out of the remaining questions.
3. Answers to sub questions must be written together

Q1. (A) Consider the following database for a chain of bookstores.
BOOKS (Booknum, Primary_author, Topic, Total_stock, price)
BOOKSTORE (Storenum, City, State. Zip, Inventory_value)
STOCK (Storenum, Booknum, Qty)
With respect to the above business scenario, answer the following questions. Clearly state any reasonable assumptions you make.
(a) Design an information package diagram. (5)
(b) Design a star schema for the data warehouse clearly identifying the Fact table(s), Dimension table(s), their attributes and measures. (5)

(B) Consider the 5 transactions given below. If minimum support is 30% and minimum confidence is 80%, determine the frequent itemsets and association rules using the a priori algorithm.

Transaction	Items
T1	Bread, Jelly, Butter
T2	Bread, Butter
T3	Bread, Milk, Butter
T4	Coke, Bread
T5	Coke, Milk

(10)

Q2. Define the following terms by giving examples
(a) Factless Fact tables
(b) Snowflake Schema
(c) Web structure Mining
(d) Classification (5 X 4 =20)

Q3. (a) Explain the ETL cycle for a data warehouse in detail. (10)
(b) Give five examples of applications that can use Clustering. Describe any one clustering algorithm with the help of an example. (10)

Q 4. (a) Consider a data warehouse storing sales details of various goods sold, and the time of the sale. Using this example describe the following OLAP operations
(1) Slice (2) Dice (3) Rollup (4) Drill down (10)
(b) With a neat diagram describe the KDD process (10)

Q5. (a) What do you mean by web mining? Explain any one web mining algorithm. (10)
(b) Describe the different features of a web enabled data warehouse. Give two example applications where such a system would be used. (10)

Q6. (a) Explain spatial and temporal data mining (10)
(b) What is the role of Meta data in a data warehouse? Illustrate with examples (10)

Q7. Describe through a short note each of the following topics:
(a) DMQL
(b) Visualization techniques for Data warehousing and mining (10 X 2 = 20)