CLASS: MCA   SEMESTER : III
BRANCH: MCA   SESSION : MO/19

SUBJECT: MCA7107 DATA MINING AND WARE HOUSING

TIME: 3 HOURS   FULL MARKS: 60

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)   Discuss with suitable diagram the three-tier architecture of data warehouse.   [6]
Q.1(b)   Describe different OLAP operations on a multidimensional data cube with example. Compare OLAP and   [6]
         OLTP.

Q.2(a)   What is data mining? Why and where do we need data mining?   [6]
Q.2(b)   Explain different data mining techniques.   [6]

Q.3(a)   Describe FP-growth tree Algorithm and Apriori Algorithm with suitable example.   [6]
Q.3(b)   Use the following transaction and find all the frequent item sets using FP Tree Algorithm. Assume   [6]
         minimum support=2, confidence= 4

Tid	List of items
T1	A,B,E
T2	B,D
T3	B,C
T4	A,B,D
T5	A,C
T6	B,C
T7	A,C
T8	A,B,C,E
T9	A,B,C

Q.4(a)   What are classification rules and how are decision tree related to them, explain entropy and gain ratio.   [6]
Q.4(b)   Explain decision tree algorithm with suitable example.   [6]

Q.5(a)   Explain the data mining task primitives with example.   [6]
Q.5(b)   Explain the concept hierarchy, how data mining queries are different from SQL queries.   [6]

Q.6(a)   Why is clustering considered as an unsupervised activity? What are the limitations of K-Means Algorithm?   [6]
Q.6(b)   What do you mean by clustering features in BIRCH algorithm? Explain the additive properties of cluster   [6]
         features.

Q.7(a)   Write short notes on Data Cube Computation methods.   [6]
Q.7(b)   Explain various methods used in Data Pre-processing.   [6]