Second Semester Examination – 2014
DATA WAREHOUSING & DATA MINING
Time: 3 Hours
Max marks: 70

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1   Answer the following questions: (2 x 10)
  a) Explain the 3-tier architecture of data warehouse in brief.
  b) Explain the architecture of data warehouse in master-slave processing.
  c) What are multidimensional databases? How do they play an important role in data warehouse?
  d) What are the tangible benefits of data warehouse?
  e) Give examples of OLAP operations.
  f) List out the classification of Data Mining System.
  g) Differentiate classification and clustering.
  h) What is a decision tree? What are the measuring factors of data mining?
  i) Differentiate page mining and web mining.
  j) What are the data mining tasks performed on a text database?

Q2 a) What is data warehousing? List out the features data warehouse.   (5)
    b) Give the architecture of data warehouse and explain it .   (5)

Q3 a) Suppose that a data warehouse consists of four dimensions customer,   (5)
        product, sales person and sales time, and the three measures Sales Amt.
        (in rupees), VAT (in rupees) and Payment_type (in rupees). Draw the
        different classes of schemas that are popularly used for modeling data
        warehouses.
    b) Write down all the steps to design a data warehouse for your college   (5)
        taking all problems into considerations.

Q4 a) Differentiate OLAP and OLTP. Explain with example. Give an account of   (5)
        OLAP tools.
    b) Give a data warehouse case study of a Customer Relationship   (5)
        Management (CRM) system.

Q5 a) Define association rule mining and explain the single dimensional   (5)
        Boolean association rules from transactional databases.
    b) What is a-priori association rule mining? Explain using an example.   (5)

Q6 a) Give an example of generalization-based mining of plan databases by   (5)
        divide-and-conquer.
    b) What do you mean by clustering? How clustering techniques helps in   (5)
        decision making? Explain with an example.

Q7 a) Describe different types of neural networks. How neural networks help in (5)
        classification?
    b) What is web mining? Give a case study of web mining.   (5)

Q8   Answer any two of the following: (5 x 2)
  a) OLAP Engine
  b) Inventory Data Warehouse
  c) FP Tree
  c) CLARA