C.U.SHAH UNIVERSITY
Summer Examination – 2022

Subject Name: Data Mining and Data Warehousing

Subject Code: 4CS06BDD1   **Branch: B.C.A.**

Semester: 6   **Date: 05/05/2022**   **Time: 02:30 To 05:30**   **Marks: 70**

Instructions:
(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

Q-1   Attempt the following questions: (14)

a) Which system that is used to process the day-to-day transactions of an organization?
A) Database system   B) Operational System
C) Decision support system   D) Informational system

b) Which of the following is not category of decision support system?
A) Communication driven   B) Data Driven
C) Decision driven   D) Document driven

c) Which of the following is not characteristic of data warehouse?
A) Subject oriented   B) Time variant
C) Data variant   D) Integrated

d) Which of the following is components of data warehouse?
A) Source system   B) Staging area
C) presentation area   D) All of these

e) Which is the full form of ETL?
A) Exact-Transform-Load   B) Extract-Transform-Load
C) Extract-Transfer-Load   D) Extract-Time-Load

f) What is the bottom tier of data warehouse 3 tier architecture?
A) It is RDBMS   B) It is used to display output
C) It is middle ware   D) All of these

g) What of the following is step to design a data warehouse?
A) business process   B) grain
C) dimension   D) All of these

h) OLTP means?
A) Offline transaction processing   B) Online transaction processing
C) Online Transact processing   D) Online threading processing

i) Which of the following is no OLAP operation?
A) Roll up   B) Drill down
C) Drill up   D) Slice

j) Which OLAP server uses star scheme?
A) ROLAP   B) MOLAP
C) WOLAP   D) All of these

k) Which is the process of investigating hidden patterns of information to various perspectives for categorization into useful data?
    A) Data pattern   B) Data mining
    C) Data warehouse   D) Data mart

l) Which of the following is not a phase of data mining process model?
    A) business understanding   B) Modeling
    C) Evaluation   D) Extraction

m) _____ is a data mining system developed by the University of Waikato?
    A) Explore   B) WEKA
    C) Java   D) Python

n) Which allows direct execution of Weka commands?
    A) Simple CLI   B) Explorer
    C) Experimenter   D) KnowledgeFlow

Attempt any four questions from Q-2 to Q-8

Q-2   **Attempt all questions**
    a) What is data warehouse? Discuss about its various characteristics. **(5)**
    b) Discuss various components of data warehousing. **(5)**
    c) Discuss the role of operational system. **(4)**

Q-3   **Attempt all questions**

    a) Draw the diagram of data warehouse 3 tire architecture and explain. **(5)**

    b) Differentiate data mart and data warehouse. **(5)**

    c) Discuss OLAP. **(4)**

Q-4   **Attempt all questions**

    a) Explain ROLAP with its advantages and disadvantages. **(5)**

    b) Explain Extraction of data in ETL. **(5)**

    c) Write a note on: Machine learning. **(4)**

Q-5   **Attempt all questions**

    a) Explain MOLAP with its advantages and disadvantages. **(5)**

    b) Explain Transformation of data in ETL. **(5)**

    c) Explain decision tree. **(4)**

Q-6   **Attempt all questions**

a) What is DSS? Explain its pros, cons and its types.   **(5)**

b) Explain OLAP operations.   **(5)**

c) Explain data understanding process in data mining model.   **(4)**

Q-7   **Attempt all questions**

a) Explain Apriori algorithm.   **(5)**

b) What is clustering? Explain hierarchical algorithm.   **(5)**

c) Explain deployment process in data mining model.   **(4)**

Q-8   **Attempt all questions**

a) List out various data mining techniques? Explain correlation and regression with suitable example.   **(7)**

b) What is WEKA? Discuss WEKA classify of explorer.   **(7)**