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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS, 2020/2021 ACADEMIC YEAR
END OF SEMESTER EXAMINATIONS
FOR THE DEGREE OF BACHELOR OF BUSINESS INFORMATION
TECHNOLOGY**

**KBA 2404: DATA WAREHOUSES AND KNOWLEDGE MINING
TECHNOLOGIES**

Date: 16 th DECEMBER, 2020
Time: 2.30 – 4.30pm

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE COMPULSORY (30 MARKS)

- a) Define the following terms
- i. Data mining (2 marks)
 - ii. Data Warehouse (2 marks)
 - iii. Online Analytical Processing (2 marks)
- b) Elaborate the following schemas as used in data warehousing
- i. Simple Star Schemas (2 marks)
 - ii. Multi-Star Schema (2 marks)
 - iii. Snowflake Schema (2 marks)
- c) Outline the typical OLAP operations (4 marks)
- d) Explain any four applications of data mining (8 marks)
- e) Describe the three-tier architecture adopted for data warehouses (6 marks)

QUESTION TWO (20 MARKS)

- a) Identify and briefly explain any five typical requirements of clustering in data mining. (10 marks)
- b) Discuss the social impact of data mining technology (10 marks)

QUESTION THREE (20 MARKS)

- a) Briefly identify the list of steps involved in knowledge discovery process (10 marks)
- b) To design an effective and efficient data warehouse, we need to understand and analyze the business needs and construct a business analysis framework. Each person has different views regarding the design of a data warehouse. Explain these views (10 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the major components of a data mining system (8 marks)
- b) Data mining involves six common classes of tasks. State and explain these classes (12 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the data mining system classification criteria (10 marks)
- b) Describe the major issues in data mining (10 marks)