



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi, Abuja-Nigeria

**FACULTY OF SCIENCE**  
**Department of Computer Science**  
**2024 1 EXAMINATION**

**COURSE TITLE: DATA MINING AND DATA WAREHOUSING**

**COURSE CODE: CIT302**

**CREDIT UNIT: 3**

**TIME: 2 Hours 30 Minutes**

**INSTRUCTIONS: Answer question 1 and any other three questions. Question 1 is compulsory**

- 1 (ai) Demonstrate your understanding of the phrase "Data mining has attracted a great deal of attention in the information industry and in society as a whole in recent years". **(5 Marks)**
- 1 (aii) What do you understand by Dependency modelling? **(3 Marks)**
- 1 (bi) Where can data patterns be mined? **(5 Marks)**
- 1 (bii) How can data mining systems be categorized? **(3 Marks)**
- 1 (Ci) What is Genetic Algorithms? **(5 Marks)**
- 1 (Cii) There are various techniques used for mining data, mention four (4) only. **(4 Marks)**
- 2(a) Briefly discuss the following data mining issues:
- Presentation and visualization of data mining results
  - Efficiency and scalability of data mining algorithms
  - Parallel, distributed, and incremental mining algorithms **(7 Marks)**
- 2(b) In data mining, what is an attribute? **(4 Marks)**
- 2(c) Enumerate the problems associated with data preparation **(4 Marks)**
- 3(a) What is a scatter Plot? **(5 Marks)**
- 3(b) What is a Loess curve? **(4 Marks)**
- 3(c) Clearly differentiate data warehouse from OLAP **(6 Marks)**
- 4(a) How does data mining for financial data analysis aids in the detection of money laundering and other financial crimes? **(5 Marks)**
- 4(b) Describe extensively the theoretical foundation of data mining system **(7 Marks)**
- 4(c) Explain briefly, the concept data warehousing and its significance to your field of study. **(3 Marks)**
- 5(a) Present five (5) Disadvantages of Data Warehouse **(4 Marks)**
- 5(b) There are two leading approaches to storing data in a data warehouse. These are: the dimensional approach and the normalized approach. Compare and contrast them. **(7 Marks)**
- 5(c) What do you understand by the term OLAP and what are the different types of OLAP? **(4 Marks)**
- 6 (a) What are the main criteria for classifying data mining systems? **(5 Marks)**
- 6 (b) Define data discrimination in data mining, and how is it used? **(5 Marks)**
- 6 (c) Briefly analyse how businesses use data mining for market analysis? **(5 Marks)**