



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
COMPUTER SCIENCE DEPARTMENT
2021_2 EXAMINATIONS⁴⁵⁶⁷⁸

DAM301 – DATA MINING AND DATA WAREHOUSING

Credit: 3 units

TIME ALLOWED: 2¹/₂ Hours

INSTRUCTION: Answer Question 1 and any other FOUR (4) Questions

1. a. Give a brief overview of Data mining (**3Marks**)
 - b. Outline the three common architectures for data warehouse design (**5 Marks**)
 - c. Outline four major parts in data preparation for modelling (**2 Marks**)
 - d. Discuss briefly the Two Crow's process model. (**3 Marks**)
 - e. Briefly highlight the different types of data normalisation methods
 - i. Decimal Scaling (**1 Mark**)
 - ii Min –Max Normalisation (**1 Mark**)
 - iii Zero-Mean Normalisation (**1 Mark**)
 - f. Outline the relationship between logical design work and physical design of data warehouse (**3**)
 - g. Outline the problems associated with neural networks (**3 Marks**)
2. a. Outline architecture for data mining with detailed diagram on integrated data mining architecture (**7 Marks**)
 - b. Distinguish between data mining and knowledge discovery in databases (**5 Marks**)
- 3.a Outline any seven Data Mining issues (**7 Marks**)

b. Highlight any five data mining technologies **(5 Marks)**

4.a. Highlight any four ways of data transformation **(4 Marks)**

b. Outline the process of data parsing and standardisation **(3 Marks)**

c. Illustrate how to handle missing data **(5 Marks)**

5.a. Briefly explain the following categories of constraint-based data mining:

i. knowledge type **(1 mark)**

ii. Rule **(1 mark)**

iii. Dimension/level **(1 mark)**

iv. Data **(1 mark)**

v. interestingness **(1 mark)**

b. Outline the techniques that can be used in mining time series data.**(7 marks)**

6.a. Highlight the following data access middleware layer:

i Structured Query Language SQL **(2 Marks)**

ii Open Database Connectivity Drivers (ODBC) **(3 Marks)**

b. Discuss Data warehouse architecture evolution **(3 Marks)**

c. Highlight and explain any three major components data warehouse architecture **(4 Marks)**

c. What are the limitations in implementing Multi-Dimensional OLAP (MOLAP) system **(2marks)**