

NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Plot 91, Cadastral Zone,

NnamdiAzikiwe Expressway, Jabi, Abuja

FACULTY OF SCIENCE

CIT 843 – DATABASE MANAGEMENT SYSTEM - 2 Units

Instruction: Answer Question 1 (25 marks) and any other three (15 marks each)

- 1(a) Describe briefly the database development process (10 marks)
- 1(b) State the goals of data requirements analysis (5 marks)
- 1(c) Identify the process for transforming a 1NF table to 2NF (10 marks)

- 2(a) One of the main responsibilities of a database developer is to enforce the three groups of integrity constraints on database tables, name these integrity constraints (6 marks)
- 2(b) A database is a collection of information that is organized so that it can easily be accessed, managed, and updated. (3 marks)
- 2(c) Identify what Database System (DBS) contains (6 marks)

- 3(a) Explain the following terms in relation to data objects (10 marks)
 - (i) Primary Key
 - (ii) Candidate Key
 - (iii) Composite Key
 - (iv) Artificial Key
 - (v) Foreign Key
- 3(b) Describe briefly the 'Data Model' (5 marks)
- 3(c) Define a database design (5 marks)

- 4(a) Describe briefly the characteristics of a good Data Model (9 marks)
- 4(b) In database design, what does the term 'Relationship' mean? (3 marks)
- 4(c) Explain briefly the connectivity of a relationship (3 marks)

- 5(a) Explain the benefits of using ER data modelling techniques to assist in the design of a relational database. (6 marks)
- 5(b) Describe the meaning and objective of data independence (5 marks)
- 5(c) What is the cardinality of a relationship? (4 marks)

- 6(a) Describe the services that are provided by Database Management Systems (8 marks)
- 6(b) Mention the properties for naming data objects (3 marks)
- 6(c) List four features commonly offered by database management system (4 marks)