NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMUNICATION AND INFORMATION SCIENCE

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

BACHELOR OF SCIENCE HONOURS DEGREE IN LIBRARY AND INFORMATION SCIENCE

DATABASE APPLICATIONS IN LIBRARIES, ARCHIVES AND PUBLISHING

ILI 2201

Second Semester Examination Paper

May 2016

This examination paper consists of 2 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Mrs. A.R. Nyaku

INSTRUCTIONS

1. Answer any <u>four</u> (4) questions.
2. Give equal time to all questions you choose.
3. Each question carries 25 marks.
4. Importance is attached to clear presentation of ideas, good expression and legibility of handwriting.

MARK ALLOCATION

QUESTION	MARKS
1.	**25**
2.	**25**
3.	**25**
4.	**25**
5.	**25**
6.	**25**

1. With the aid of relevant examples discuss the following database models.
1.1 Hierarchical Model   [8 marks]
1.2 Relational Model   [9 marks]
1.3 Network Model   [8 marks]

2. Critique the notion of distributed database systems in academic libraries.   [25 marks]

3. Discuss the ACID properties of database transactions.   [25 marks]

4.1 Analyse the importance of the normalisation technique, given the details in Table, 1.
                                                                                [8 marks]

Table 1: Student details

Student name	Student id	Age	Date of Birth	Course code	Course Title	Student grade
Moyo	N0078	18	24/02/1998	Ili2201	Databases	1
Dube	P0067	19	08/12/1997	Ili2201	Databases	2.1
Moyo	N0078	18	24/02/1998	Ili2202	Research	2.1
Prince	N0065	23	20/06/1993	Ili2205	Academic libraries	P

4.2 Examine the Table 1 and explain update and deletion anomalies that may occur if the
    table is not normalized   [7 marks]

4.3 Discuss the Normal forms that are violated in this table, and demonstrates how the table
    can be normalised   [10 marks]

5   Assess the role of a database administrator within a Zimbabwean library environment.
                                                                                [25 marks]

6. Analyse the impact of the Internet on Library Database Systems.   [25 marks]