COURSE CODE: CIT 344

COURSE CREDIT: 3

COURSE TITLE: INTRODUCTION TO COMPUTER DESIGN

TIME ALLOWED: 2 $^1/_2$ Hours

INSTRUCTION: ANSWER QUESTION **ONE (1)**, AND ANY **FOUR (4)** QUESTIONS

QUESTIONS

1a.   Explain briefly the following terms;

Memory Organization   **3marks**

Read/Write Signals   **5marks**

Address signals   **4marks**

1b.   In computer memory organization, the term 'Nibble' is regarded as _____.
2marks

1c.   With the aid of diagram, briefly explain how sequential circuits are implemented. **8marks**

2a   Write the binary equivalent of the following decimal numbers

  I.   10
 II.   11
III.   4
IV.   7
 V.   3   **(2marks each, total 10marks)**

2b.   Distinguish between the two (2) main types of sequential circuits. (2 marks)

3a.   Enumerate any four (4) types of ROM available   4marks
3b.   Briefly explain all the different types of ROM   8marks

4a. Illustrate extensively with the aid of a diagram, how a full adder can be built from half adders. **10marks**

4b. Concisely describe microprocessor speed and how it works **2marks**

5a. The CPU fetch-execute cycle consists of some specific functions, mention any two. **1mark**

5b. Write a program to execute the 'fetch-execute cycle' mentioned above. **10marks**

5c. State any two (2) benefits of using high level programming language. **1mark**

6a. Discuss briefly the function of ALU **5marks**

6b. In assembly language, debugging a program provides certain sets of command that allows instructions to be processed, state any seven (7). **7marks**