NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
JUNE/JULY EXAMINATION

COURSE CODE: CIT309
COURSE TITLE: COMPUTER ARCHITECTURE (3 UNITS)
TIME ALLOWED: $2^1/_2$ HOURS
INSTRUCTION: ANSWER ANY FOUR QUESTIONS IN ALL

1a. Illustrate with simple diagram the basic Instruction fetch and execution cycle. [10.5 marks]
1b. Write short note on the three components of the C. P. U. [7 marks]

2a. When does the Overflow rule occur? [7.5 marks]
2b. Explain the (4) elements of a machine instruction. [10 marks]

3a Give (4) examples of shorter sub cycles/operation that made up of an instruction cycle. [7.5 marks]
3b Write short note on the following: [10 marks]
i. Multithreading
ii. Process switch
iii. Thread
iv. Thread switch

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4a. List and briefly explain the four (4) characteristics of Reduced Instruction Set architecture. [10 marks]
4b. Differentiate between the Structure and Function of a Computer system. [7.5 marks]

5a. Discuss why (PC - MAR) must precede (Memory - MBR) operation in fetch cycle. [5.5 marks]
5b. State the (4) characteristics of reduced instruction set architectures. [12 marks]

6a. List and describe the two (2) basic tasks of control unit.
[7 marks]

6b. Copy and complete the table below.
[10.5 marks]

A	**B**	$\vec{A}$	$\vec{B}$	**A.B**	**A+B**	$(\vec{A}.B)$	¿¿	**(A XOR B)**
0	**0**							
0	**1**							
1	**0**							
1	**1**							