NATIONAL OPEN UNIVERSITY OF NIGERIA,
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS.
SCHOOL OF SCIENCE AND TECHNOLOGY
OCTOBER 2016 EXAMINATION

Course code: CIT309
Course Title: Computer Architecture
Time: 2 Hours
Instruction: Answer any Four (4) questions.

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

.
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**							