NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION
SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: **CIT411**
COURSE TITLE: **MICROCOMPUERS AND MICROPROCESSORS**

INSTRUCTION: *Answer Question 1 and any other three.*
Time: 2 HOURS

1.
    a.   Write a brief note on each of the following:
          i.   VLSI technology
          ii.   RISC processor
          iii.   ALU
    b.   D istinguish between **Von Neumann** and **Harvard** arch tectures.

2.
    a.   For a microprocessor briefly describe th e following features:
          i.   Word-size
          ii.   Processing speed
          iii.   Instruction set
          iv.   Memory
    b.   D istinguish between **independent I/O**an d **memory-mapped I/O.**

3.
    a.   D istinguish between **machine language**nd**assembly language**.
    b.   Write a brief note on each of the following:
          i.   Assembler directive
          ii.   Subroutine
          iii.   Instruction

4.
    a.   B riefly describe what **DirectMemory Ac ess** (DMA) is.
    b.   D istinguish between **Instruction Set Architecture** and **Microarchitecture**.

5.
    a.   Write brief notes on the following:
          i.   Accumulator
          ii.   Program counter
          iii.   Stack pointer
    b.   Write down the full interpretation of the following instructions:
          i.   MOV R2, #80h
          ii.   POP 0h
          iii.   ADD A, #25h
          iv.   INC R7

6.
    a.   B riefly describe what an **interrupt** is, and explain what happens wh en it is trigger ed.
    b.   Write brief notes on the following:
          i.   Opcode
          ii.   Oper and
          iii.   Address Bus
          iv.   Data Bus