## UNIVERSITY EXAMINATION

## 1$^{ST}$ YEAR 2$^{ND}$ SEMESTER 2013/2014

### 2013/2014 ACADEMIC YEAR

### FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

**COURSE CODE**: DIT 050

**COURSE TITLE**: INFORMATION TECHNOLOGY ESSENTIALS

**DATE**:    11$^{th}$ August,2014                    **TIME**: 9.00 am - Noon

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INSTRUCTIONS

- *Answer Question One and any other two*

- *Question one is compulsory*

**QUESTION ONE (24 MARKS)**
(a) Describe in detail the following computer components
   (i) Computer hardware
   (ii) Power supply
   (iii) Graphic card
   (iv) Sound card
   (v) Random Access Memory (RAM)                                                   [10 marks]
(b) Using examples distinguish between primary memory and secondary memory          [3 marks]
(c) Define the term Operating System                                                [2 marks]
(d) Explain the basic functions of an operating system                              [4 marks]
(e) Define the term "cloud computing"                                               [2 marks]
(f) State two advantages and one disadvantage of cloud storage                      [3 marks]

**QUESTION TWO [18 MARKS]**
(a) Explain the meaning of removable backup storage media                           [4 marks]
(b) Describe in detail any six different removable media devices, citing the strength and weakness of
    each.                                                                           [12 marks]
(c) A user has been writing data to a USB memory drive. What should this user do before removing the
    device                                                                          [2 marks]
**QUESTION THREE [18 MARKS]**
(a) Describe the following memories
   (i) Random Access Memory
   (ii) Read Only Memory
   (iii) Cache Memory
   (iv) Virtual Memory                                                              [8 marks
(b) Compare and contrast the memories in question three (a) above in terms of cost, size and speed.
                                                                                    [8 marks
(c) Explain the main functions of Read Only Memory                                  [2 marks]
**QUESTION FOUR [18 MARKS]**
(a) Explain the term number system and distinguish between the Decimal number system and
    Hexadecimal number system                                                       [4 marks]
(b) Using examples, distinguish between the terms Bit and Byte                       [2 marks]

(c) Convert the following numbers system as specified
  (i) 157  Decimal to Binary
  (ii) 76.25 Decimal to Octal
  (iii)1110101 Binary to Decimal
  (iv)11010.01 Binary to Decimal
  (v) $164352_8$ Octal to binary equivalent [10 marks]
(d) Write the following acronym in full:-
    (i)  ASCII
    (ii) EBCD [2 marks]

## QUESTION FIVE [18 MARKS]
 (a) Outline the main features of $5^{th}$ generation computers that distinguish them from the earlier generations [10 marks]
 (b) Networking of computer systems allow the sharing of computing and data resources, however, it comes with disadvantages. Name and briefly explain some of these disadvantages. Give preventive measures to be put in place to avoid such happenings. [8 marks]