TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA MECHANICAL & AUTOMOTIVE ENGINEERING
(DMAE 14J)

EMR 2102: ICT I

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 2014
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*
This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages

Question One (Compulsory)

a) Define the term computer system.   **(2 marks)**

b) State the meaning of the following terms as used in computer systems:
    (i) Memory
    (ii) Firmware
    (iii) Soft copy
    (iv) Peripheral   **(4 marks)**

c) Briefly explain FIVE major hardware components found within the system unit of a computer.
                                                                             (5 marks)
d) Explain the following input devices:
    (i) Scanner
    (ii) Bar code reader
    (iii) Biometric scanner   **(6 marks)**

e) State THREE disadvantages of computers.   **(3 marks)**

Question Two

a) Differentiate between computer hardware and software. Give one example of each.   **(3 marks)**

b) List THREE examples of both input and output devices as found on a computer.   **(6 marks)**

c) Explain FOUR advantages of using computers.   **(8 marks)**

d) List THREE examples of storage media types.   **(3 marks)**

Question Three

a) List and explain FIVE functions of the operating system on a computer.   **(10 marks)**

b) Write short notes on the following types of computers: **(10 marks)**
    (i) Work station
    (ii) Main frames
    (iii) Mini computers
    (iv) Laptops
    (v) Super computers

Question Four

With examples, describe the following generations of computers:

    a) 1st Generation computers
    b) 2nd Generation computers
    c) 3rd Generation Computers
    d) 4th Generation Computers
    e) 5th Generation Computers   **(20 marks)**

Question Five

a) What is the difference between the following:
    (i) Operating system
    (ii) Application system
    (iii) Firmware   **(6 marks)**

b) Explain the functions of the following computer components:
    (i) Random Access Memory
    (ii) Arithmetic Logic Unit
    (iii) Registers
    (iv) Computer Bus
    (v) Motherboard   **(10 marks)**

c) List FOUR advantages of using the Internet in relation to Marine Engineering.   **(4 marks)**