TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA INFORMATION COMMUNICATION TECHNOLOGY (DICT 15J)

ECS 2101: COMPUTER SYSTEM & ORGANIZATION

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
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 (Compulsory)** 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) List the main characteristics of the computer. **(4 marks)**

b) Define peripheral devices **(2 marks)**

c) Explain FOUR types of operating system **(4 marks)**

d) Explain FOUR numbering system **(8 marks)**

e) Differentiate between primary memory and secondary memory **(4 marks)**

Question Two

a) Explain the components of computer system **(6 marks)**

b) List the different memories available in the computer in order of their hierarchy with respect to the CPU **(6 marks)**

c) Convert the following decimal numbers into binary and hexadecimal **(8 marks)**
(i) 675_{10}
(ii) 89_{10}

Question Three

a) Define the term computer system **(1 mark)**

b) Differentiate between 'input devices" and 'output devices" stating TWO examples for each. **(4 marks)**

c) (i) List any FIVE system utilities
(ii) Explain the purpose for each **(5 marks)**

d) Discuss the general characteristics of memory system.

e) Explain the use of virtual memory and discuss its concept **(10 marks)**

Question Four

a) Explain the functions of the following parts of CPU **(6 marks)**
(i) Control unit
(ii) Main memory
(iii) Arithmetic logic unit

b) Explain the different classification of digital computers **(6 marks)**

c) State any FOUR types of registers **(4 marks)**

d) Explain the difference between primary memory and secondary memory **(4 marks)**

Question Five

a) Describe the generations of computers **(5 marks)**

b) Explain the input-process-output cycle **(4 marks)**

c) Explain any FOUR factors affecting the performance of a computer **(4 marks)**

d) Convert 100112 into decimal number form **(2 marks)**

e) Convert octal numbers 2348 into decimal numbers form (**2 marks)**

f) State THREE application areas of 1CT **(3 marks)**