**W1-2-60-1-6**

##  JOMO KENYATTA UNIVERSITY

 **OF**

 **AGRICULTURE AND TECHNOLOGY**

# University Examinations 2015/2016

**YEAR ONE SEMESTER ONE EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**BIT 2102: COMPUTER SYSTEMS AND ORGANIZATIONAL**

**DATE: AUGUST 2016 TIME: 2 HOURS**

**QUESTION ONE (COMPULSORY – 30 MARKS)**

a) Explain the meaning of the following terms; (10 marks)

 Thrashing

 Bios

 Rom Bios

 Interrupts

 Post

b) State the advantage of Risc over Cisc (4 marks)

c) Using examples differentiate between volatile and non- volatile memory (6 marks)

d) i) Convert decimal 14 into its binary equivalent (2 marks)

 ii) Convert the octal number 364 to its decimal equivalent (2 marks)

 iii) Convert the hexadecimal number 4B8 to its decimal equivalent

 (2 marks)

 iv) Convert the decimal number 67 to its hexadecimal equivalent

 (2 marks)

e) What is a BIT? (2 marks)

**QUESTION TWO (20 MARKS)**

a) Briefly classify computers according to size (8 marks)

b) Distinguish between data and information (4 marks)

c) Explain the functions of Arithmetic and logic unit (8 marks)

**QUESTION THREE (20 MARKS)**

a) Define HARD DISK (2 marks)

b) Describe how a hard disk works (6 marks)

c) What is fragmentation and how can it be countered? (6 marks)

d) What does the term hard disk head crash mean (6 marks)

**QUESTION FOUR (20 MARKS)**

a) Define memory (2 marks)

b) Describe cache memory (2 marks)

c) Describe the term memory protection (6 marks)

d) Explain the meaning of virtual memory and give its advantage (6 marks)

**QUESTION FIVE (20 MARKS)**

a) What is a device driver? (4 marks)

b) Describe any three functions of the operating system (6 marks)

c) Describe briefly any five application areas of computers (10 marks)