

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

## JOMO KENYATTA UNIVERSITY

**OF**

**AGRICULTURE AND TECHNOLOGY**

# University Examinations 2014/2015

**FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS INFORMATION TECHNOLOGY/COMMERCE/SUPPLY CHAIN MANAGEMENT**

**BBT 2102/HBC 2106 : FUNDAMENTALS/FOUNDATION OF**

**COMPUTER SYSTEMS**

**DATE: AUGUST 2015 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND**

**ANY OTHER TWO QUESTIONS.**

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**QUESTION ONE (30 MARKS)**

(a) What is an instruction cycle? [2 marks]

(b) Using a diagram of a basic instruction cycle, explain the two steps that take place when processing an instruction. [6 marks]

(c) Complete the table below showing the values of storage units:

[4 marks]

2 Megabytes = ? Kilobytes

1 Terabyte = ? Gigabytes

? Kilobyte = 2048 Bytes

1 Gigabyte = ? Kilobytes

(d) Explain the term ROM and RAM giving to examples of each.

[4 marks]

(e) Differentiate between system software and application software, giving two examples of each. [4 marks]

(f) Describe any five commonly used application programs, giving two examples of each. [10 marks]

**QUESTION TWO (20 MARKS)**

Outline the history of computers, beginning with the first generation to the current generation. For each generation, identify its basic component, and then list some of its main features. [20 marks]

**QUESTION THREE (20 MARKS)**

(a) What is an operating system? [2 marks]

(b) Discuss any five characteristics of an operating system. [10 marks]

(c) The major interface changes brought on by Windows 8 are listed below. Briefly explain each one. [8 marks]

1. Start screen.
2. Live tiles.
3. Hot corners.
4. Charms bar.

**QUESTION FOUR (20 MARKS)**

(a) The Central Processing Unit is charged with processing instructions. Explain the following instruction operations it performs: [10 marks]

1. Data transfer.
2. Conversion.
3. Input/output.
4. Arithmetic.
5. Transfer of control.

(b) Explain the following micro-operations performed by the control unit: [10 marks]

1. Fetch cycle.
2. Indirect cycle.
3. Interrupt cycle.
4. Execute cycle.
5. Instruction cycle.

**QUESTION FIVE (20 MARKS)**

(a) Explain the reason why computer networks are installed in any organization. [8 marks]

(b) List and describe the six components of a computer network.

[12 marks]