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**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2014/2015**

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE**

**DEGREE OF BACHELOR OF COMMERCE/**

**BACHELOR OF BUSINESS INFORMATION TECHNOLOGY**

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

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

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

1. What is an instruction cycle? [2 marks]
2. Application software can be a software package or a software suite.

Define software package and software suite. [4 marks]

1. List and explain the THREE bus types. [6 marks]
2. The arithmetic and logic unit of a processor consists of two sub-sections,

explain the two. [4 marks]

1. List and explain any THREE characteristic features of an operating system. [6 marks]
2. Perform the following number conversions: [8 marks]
3. Binary 111012 to Hexadecimal
4. Octal 258 to Binary

**QUESTION TWO (20 MARKS)**

1. Explain the following micro-operations: [8 marks]
2. Fetch cycle
3. Execute cycle
4. Interrupt cycle
5. Instruction cycle
6. Explain the different types of computer systems based on categorization

 by size/speed and according to working principle. [12 marks]

**QUESTION THREE (20 MARKS)**

1. Explain at least FIVE reasons why computer networks could be installed in

an organization. [10 marks]

1. List and explain any FIVE instruction sets normally performed by the

Central Processing Unit. [10 marks]

**QUESTION FOUR (20 MARKS)**

1. Explain the following types of programs that make up system software: [8 marks]
2. Operating system
3. Utilities
4. Device driver’s
5. Language translators
6. Explain the FOUR ways of categorizing systems with parallel processing

capabilities. You can use diagrams to aid in your explanation. [12 marks]

**QUESTION FIVE (20 MARKS)**

1. What is system software? [2 marks]
2. List and explain the FOUR causes of interrupts in the normal processing

of an instruction. [8 marks]

1. List and describe any FIVE components of a computer network. [10 marks]