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

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

# **UNIVERSITY EXAMINATIONS 2017/2018**

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

**BIT 2102 : COMPUTER SYSTEMS AND ORGANIZATION**

**DATE: DECEMBER 2017 TIME: 2 HOURS**

**INSTRUCTIONS:**

**ANSWER QUESTION ONE [COMPULSORY] AND ANY OTHER TWO QUESTIONS**

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**QUESTION ONE [30 MARKS]**

1. Explain the following terms [12 marks]
2. Device driver
3. Operating systems
4. Thrashing
5. BIDS
6. Differentiate between intercepts and exceptions [4 marks]
7. Distinguish between data and information [4 marks]
8. (i) Convert the octal number 364 to its decimal equivalent [2 marks]

(ii) convert 14 into its binary equivalent [2 marks]

1. List any two features of fifth generation computers [4 marks]

**QUESTION TWO [20 MARKS]**

1. Using examples differentiate between volatile and non-volatile memory [4 marks]
2. Briefly classify computers according to size [8 marks]
3. Explain the functions of arithmetic and logic unit. [8 marks]

**QUESTION THREE [20 MARKS]**

1. Define hard disk [2 marks]
2. Describe how a hard disk works [6 marks]
3. What is fragmentation and how can it be countered. [6 marks]
4. What does it mean when the hard disk has a head crash [6 marks]

**QUESTION FOUR [20 MARKS]**

1. Define memory [2 marks]
2. Describe cache memory [6 marks]
3. Describes memory protection [6 marks]
4. Explain the meaning of the term virtual memory and give none advantage [6 marks]

**QUESTION FIVE [20 MARKS]**

1. Describe any five functions of the operating system [10 marks]
2. Describe any five threats to the computer system [10 marks]