TECHNICAL UNIVERSITY **OF MOMBASA**

UNIVERSITY EXAMINATION FOR:

BSME Y2S1

ICS 2174: INTRODUCTION TO COMPUTER SCIENCE

END OF SEMESTER EXAMINATION

SERIES:

TIME: HOURS

DATE:

Instructions to Candidates
You should have the following for this examination
-*Answer Booklet, examination pass and student ID*
This paper consists of   questions. Attempt

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Do not write on the question paper.

Question ONE (30 marks)
a. Define the following terms:
    i. A computer   **(3marks)**
ii. A "userless computer" (Give an example to illustrate your answer)   **(2marks)**

b. A computer can be viewed as a system. Giving examples to illustrate your points, discuss the components that make up a computer system.   **(6marks)**

c. Discuss two categories of memory found on a computer. For each category give an example
                                                                                                (4 marks)

d. Using a well labeled diagram, describe the fetch-decode-execute cycle.   **(8 marks)**

e. There are three basic types of computers: Digital, Analog and Hybrid. Giving examples differentiate between the three.   **(7 marks)**

Question TWO (20 marks)
a. Discuss the history of computing through the generations.   **(10 marks)**
b. Discuss the specifications to be considered when buying a computer   from the market**(10 marks)**

Question THREE (20 marks)
a. Differentiate between:
  -   The Internet and Intranet   **(2 marks)**
  -   World Wide Web and Internet   **(2 marks)**
  -   Intranet and extranet. Give examples of each   **(6 marks)**

b. Explain any five requirements needed to connect to the Internet   **(5 marks)**
c. List and briefly explain any six services that are accessible over the Internet **(5 marks)**

Question FOUR (20 marks)
 a. Calculate the following   **(10 marks)**
  -   11101 x 1101
  -   110101 / 101
  -   1010101 – 101101
  -   1010111 + 1101101
  -   111101 x 1011
 b. Convert the results above to   **(10 marks)**
  -   Decimal
  -   Hexadecimal
  -   Octal

Question FIVE (20 marks)
 a. What factors should you consider when choosing a CPU? Discuss 5   **(10 marks)**
 b. Buying a computer from the market requires a careful consideration. Explain any three specifications that one should considered when sourcing for a computer.   **(6 marks)**
 c. Highlight three sources of computer viruses.   **(4 marks)**