



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

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)**
- 11101×1101
- $110101 / 101$
- $1010101 - 101101$
- $1010111 + 1101101$
- 111101×1011
- 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)**