MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
FIRST YEAR FIRST SEMESTER

SCHOOL OF SCIENCE AND INFORMATION SCIENCES
BACHELOR OF SCIENCE (MATHEMATICS)
BACHELOR OF SCIENCE (PHYSICS)
BACHELOR OF SCIENCE (CHEMISTRY)
BACHELOR OF SCIENCE IN APPLIED STATISTICS WITH COMPUTING
BACHELOR OF SCIENCE (MICROBIOLOGY)
BACHELOR OF SCIENCE IN ZOOLOGY
BACHELOR OF SCIENCE IN BOTANY
BACHELOR OF SCIENCE (COMPUTER SCIENCE)

COURSE CODE: COM 1103
COURSE TITLE: INTRODUCTION TO COMPUTERS AND COMPUTING

DATE: 7TH DECEMBER 2018   TIME: 1430 - 1630HRS

INSTRUCTIONS TO CANDIDATES

Answer Question **ONE** and any other TWO questions

This paper consists of 2 printed pages. Please turn over.

SECTION A (30Marks): Answer **all** questions from this section

QUESTION 1

(a) Convert the following octal number to decimal **(4 Marks)**

   (a) 114

   (b) 321

(b) Give two advantages and two disadvantages of application packages

(4 Marks)

(c) List and explain four categories of computer hardware. **(4 Marks)**

(d) Explain a few of the different ways in which computers used in schools can be categorized. **(3 Marks)**

(e) List and explain the common types of networks **(4 Marks)**

(f) What is Cyber terrorism **(3 Marks)**

(g) Start with the seed $X_0 = 47$ and generate 10 pseudo-random numbers using the formula $X_n = 47\, X_{n-1} \pmod{100}$ **(4 Marks)**

(h) Describe the concept of a computer system and explain the information processing steps **(4 Marks)**

SECTION B (40Marks): Answer **TWO** questions from this section

QUESTION 2

(a) Give three functions of the Arithmetic and Logic Unit (ALU) **(3 Marks)**

(b) Describe the two common designs of desktop computers **(2 Marks)**

(c) Give the steps involved in creating the following using Microsoft word

(9 Marks)

      (i) Table of content

      (ii) Table of figures

      (iii) References

(d) Solve for x in the following equation. **(6 Marks)**

    (i) $x + 7 \equiv 4 \pmod 9$

    (ii) $5x \equiv 3 \pmod{11}$

    (iii) $X^2 \equiv 5 \pmod{11}$

QUESTION 3

(a) Explain five factors to consider when buying a computer hardware

(5 Marks)

(b) List and explain any three network topologies. **(6 marks)**

(c) Explain the various ways computer technologies are being used to train High school teachers **(4 Marks)**

(d) Explain the terms "Userless computers" and give two examples

(3 Marks)

QUESTION 4

(a) State the four basic operations of a computer **(4 Marks)**

(b) Perform the following octal additions **(6 Marks)**

(i) 445 + 176

(ii) 2536 + 7714

(c) Give four examples of ways to prevent an unauthorized users from accessing your computer **(4 Marks)**

(d) Discuss the two types of standards in the network industry listed below

(6 Marks)

(i) Defacto standards

(ii) Dejure standards

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