



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR
FIRST YEAR FIRST SEMESTER**

**SCHOOL OF SCIENCE AND INFORMATION
SCIENCES
BACHELOR OF SCIENCE IN INFORMATION
SCIENCE**

**COURSE CODE: INS 1103
COURSE TITLE: INTRODUCTION TO
INFORMATION TECHNOLOGY**

DATE: 02-12-19

TIME: 0830-1030HRS

INSTRUCTIONS TO CANDIDATES

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

This paper consists of 3 printed pages. Please turn over.

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

QUESTION 1

- (a) Distinguish between **(4 Marks)**
- (i) Analog and digital data
 - (ii) Active attack and Passive attack
- (b) State and give an explanation of the four basic operations of a computer **(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 for business management can be categorized. **(3 Marks)**
- (e) Convert the following binary fractions to decimal **(3 Marks)**
- (i) 0.10001
 - (ii) 0.1111
 - (iii) 0.111
- (f) Perform the following hexadecimal additions **(3 Marks)**
- (i)
$$\begin{array}{r} A5A \\ + 2F5 \\ \hline \end{array}$$
 - (ii)
$$\begin{array}{r} 3E5 \\ + DDC \\ \hline \end{array}$$
 - (iii)
$$\begin{array}{r} 20B6 \\ + AE49 \\ \hline \end{array}$$
- (g) Convert the following decimal numbers to BCD **(3 Marks)**
- (i) 2981
 - (ii) 487
- (h) Describe what is distributed denial of service attack and how to mitigate against such attacks **(4 Marks)**
- (i) What is Cyber terrorism **(2 Marks)**

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

QUESTION 2

- (a) Define **(6 Marks)**
- (i) system unit
 - (ii) workstation
 - (iii) notebook
 - (iv) stylus
 - (v) software or programs
 - (vi) A computer?
- (b) Differentiate between a centralized system and a distributed system **(2 Marks)**
- (c) Describe the two common designs of desktop computers used for Human Resource Management studies. **(2 Marks)**

- (d) List four types of computers that are designed for use by organizations, and are commonly used by multiple people at the same time. **(4 Marks)**
- (e) Discuss the main types of threat that could affect a computer system, and for each, describe the possible outcomes for an organization. **(6 Marks)**

QUESTION 3

- (a) Explain how the following devices work indicating whether they are used input or output **(4 Marks)**
- (i) Speech devices
 - (ii) Touch screen
 - (iii) Touch pad
 - (iv) Light pen
- (b) Briefly explain the key design issues that a network designer should take into consideration when designing a corporate network. **(3 marks)**
- (c) Explain the various ways computer technologies are being used to train Medical Doctors **(3 Marks)**
- (d) Explain the terms “Userless computers” and give two examples **(2 Marks)**
- (e) A single researcher sets out to conduct a research study at the Maasai Mara Game Reserve. List the types of personal computers that are available for him to use and state the one you will you recommend for him giving reason **(4 Marks)**
- (f) Describe the concept of a computer system and explain the information processing steps **(4 Marks)**

QUESTION 4

- a) Discuss the challenges that an organization which conducts its activities manually must overcome if they decide to adopt computer technology for their operations **(6 Marks)**
- b) Give four examples of methods used to prevent an unauthorized user from accessing a computer **(4 Marks)**
- c) Explain any four benefits that an organization can realize by the use of distributed systems as opposed to centralized systems **(4 Marks)**
- a) Describe the following techniques as used in Microsoft word processing software **(6 Marks)**
- (i) Table of figures
 - (ii) References
 - (iii) Table of content
 - (iv) Footnote
 - (v) Table of tables
 - (vi) Table of formulas

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