**Name …………………………………...................… Index No ……………………/……..**

**Candidate’s signature …………………..………………… Class …………………………………………**

**Kenya Certificate of Secondary Education**

**STAREHE GIRLS CENTRE & SCHOOL**

**Form Four**

**MOCK EXAMINATION**

**Term II Year 2015**

***Continuous Assessment Test Series 02/2015***

**451/1**

**Computer Studies (Paper 1)**

**(THEORY)**

**JUNE/JULY 2015**

2½ hours

**INSTRUCTIONS TO CANDIDATES**

1. *Write your name and index number in the spaces provided above.*
2. *Sign and write the name of examination in the spaces provided above.*
3. *This paper consists of* ***TWO*** *sections;* ***A*** *and* ***B.***
4. *Answer* ***ALL*** *the questions in section* ***A****.*
5. *Answer question* ***16*** *and any other* ***THREE*** *questions from section* ***B****.*
6. *All answers should be written in the spaces provided on the question paper.*

***For official Use Only***

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| --- | --- | --- | --- |
| **Section** | **Question** | **Max. Score** | **Actual Score** |
| **A** | 1-15 | 40 |  |
| **B** | 16 | 15 |  |
| 17 | 15 |  |
| 18 | 15 |  |
| 19 | 15 |  |
| 20 | 15 |  |
| **TOTAL SCORE** | 100 |  |

*This paper consists of 11 printed pages*

***(SECTION A)***

***(Do all questions in this section)***

1. What is a **system clock**? [1 Mark]

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1. a) What is a **logical topology**? [1 Mark]

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b) Give any **two** examples of **logical topologies** [1 Mark]

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1. Distinguish between **internet** and **intranet** [2 Marks]

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1. Describe the terms given below as used in spreadsheets [2 Marks]
2. Sorting

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1. Filtering

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1. a) What is **data integrity** with respect to data processing? [1 Mark]

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b) List down any **two** measures which can be undertaken to minimize threats to data integrity.

 [2 Marks]

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1. a) Explain what **prototyping** is with regard to system development [1 Mark]

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b) Write the acronyms given below in full [1 Mark]

RAD

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JAD

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1. a) In **which stage** of systems development are files or data stores identified [1 Mark]

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b) Explain the meaning of the terms given below with respect to file design [2 Marks]

Key field

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Field length

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1. State any **four** types of damages caused by an attack from malicious software on a computer

[2 Marks]

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1. a) Describe the terms given below in relation to tables manipulation in word processing

[2 Marks]

Merging cells

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Border weight

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b) Distinguish between **footnotes** and **endnotes** [2 Marks]

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1. a) What is the difference between a **digitizing tablet** and a **tablet computer**? [2 Marks]

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b) State any **two** situations that would make the use of a **touch screen** more favourable compared to use of other input devices to input data and commands into a computer [2 Marks]

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1. a) What is a **fibre optic cable**? [1 Mark]

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b) List down any two advantages of using **fibre optic transmission** [2 Marks]

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c) What is **crosstalk**? [1 Mark]

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1. Describe the features given below in relation to desktop publishing [3 Marks]

Pasteboard

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Master pages

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Non printable guides

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1. Differentiate between **automatic recalculation** and a **function** as used in spreadsheets

 [2 Marks]

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1. a) What is a **world wide web**? [1 Mark]

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b) Below is a list of acronyms of protocols at work on the internet and emails. Write them in full.

[2 Marks]

HTTP

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FTP

…………………………………………………………………………………………………………

SMTP

…………………………………………………………………………………………………………

POP

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1. a) Distinguish a **physical drive** from a **logical drive** in relation to disk management using operating systems. [2 Marks]

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b) What is an **interrupt**? [1 Mark]

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***(SECTION B)***

***(Answer question sixteen and any other three questions from this section)***

1. Carefully study the flowchart below and use it to answer the questions that follow

N

Y

START

A = 10

X = 2

Y = 5

WRITE A

A = A – X

A = A + Y

Is

A>20

?

B = A \* Y

WRITE B

STOP

a) (i) Determine the outputs from the flowchart above and show your working [5 Marks]

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 (ii) Name the control structures used in the flowchart [1 Mark]

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b) Write a pseudocode for the flowchart above [5 Marks]

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c) (i) What is a language translator [1 Mark]

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 (ii) Differentiate between a compiler and an interpreter [2 Marks]

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 (iii) What are **structured languages**? [1 Mark]

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1. a) What is a coding scheme in relation to data representation in computers? [1 Mark]

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b) Differentiate between the ASCII and EBCDIC coding schemes? [2 Marks]

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c) In a particular coding scheme letter P is represented using a binary number 11011102. Determine a binary code that would be used to represent letter H in the same coding scheme.

 [3 Marks]

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d) Using direct subtraction evaluate 10011112 - 1011012 [2 Marks]

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e) Using 2s complement evaluate 2310 - 3110 [5 Marks]

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f) Solve 1011102 + 11112 + 1111012 [2 Marks]

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1. a) What is system analysis? [1 Mark]

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b) The development of a Financial Management System was scheduled to take a maximum of 7 months. However it surpassed that period by 3 more months. The cost of developing it skyrocketed from an initial figure of Ksh 200,000 to Ksh 500,000. Important documents about its development and how it is used were missing at the end of the development.

(i) Point out any three areas of the whole development process that may have gone wrong at the very beginning? [3 Marks]

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 (ii) Describe what takes place in any two of the identified stages in (i) above [2 Marks]

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c) List down any four characteristics of a system [2 Marks]

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d) List down any two advantages of indexed sequential file organization [2 Marks]

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e) The diagram given below depicts a data processing mode. Study it carefully and answer the questions that follow.

JOBS QUEUE

Processor 1

Job 1 Part 1

Processor 2

Job 1 Part 2

Processor 3

Job 1 Part 3

Processor 4

Job 1 Part 4

Job 2

Job 3

Job 4

Job 5

Job 6

Job Distributor

(i) Identify the mode of processing depicted by the diagram above. [1 Mark]

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 (ii) Describe this mode of processing [3 Marks]

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f) List down any two tests for data validity with respect to data processing [1 Marks]

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1. a) A computer user was using a network link to access computers outside a LAN. When he could not access the contents of a particular computer he guessed the password and was allowed to access.

(i) Name any two likely computer crimes he was committing. [2 Marks]

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(ii) Describe two intervention measures which the network administrator of the intruded network could use to detect and curb the crime? [4 Marks]

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(b) A news journalist was using a camera attached to a laptop, a microphone and a high speed broadband internet connection for reporting back to the broadcasting house.

(i) Identify this type of internet service at work for this journalist [1 Mark]

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(ii) List down any two advantages of using this kind of internet service [2 Marks]

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(iii) What is a broadband connection [1 Mark]

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 (iv) How were the devices listed below used by the journalist? [2 Marks]

Camera

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Microphone

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c) Describe the communication devices given below [2 Marks]

Switch

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Access point

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d) State the name of a communication device used to reduce the problems of attenuation

 [1 Mark]

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1. a) What is **what if analysis**? [1 Mark]

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b) Write down one example of [2 Marks]

(i) a formula

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 (ii) a function

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(iii) Differentiate **cell reference** from **cell range** [2 Marks]

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c) (i) What is the use of queries in databases? [1 Mark]

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 (ii) Describe a **relational database model** [3 Marks]

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f) (i) Distinguish Object placeholder from Text placeholder as used in DTP [2 Marks]

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(ii) List down any four formatting operations that can be done to a drawing object in DTP

[2 Marks]

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(iii) Give two reasons why a drop cap would be used on a text during DTP? [2 Marks]

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