

Name

Index No.....

School

Candidate's Signature

Date

451/1

COMPUTER STUDIES

Paper 1

THEORY

2 ½ Hours

Kenya Certificate of Secondary Education (K.C.S.E)

451/1

COMPUTER STUDIES

Paper 1

THEORY

2 ½ Hours

INSTRUCTIONS TO CANDIDATES:

- Answer **ALL** the questions in section **A**.
- Answer question **16(compulsory)** and any other **THREE** questions from section **B**.

FOR EXAMINERS USE ONLY

Section	Question	Score
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
TOTAL SCORE		

This paper consists of 10 printed pages

Candidates should check the question paper to ensure that all the printed pages are printed as indicated and no questions are missing.

SECTION A (40 MARKS)

Answer all the questions in this section

Turn Over

1. State **four** different parts that make up a computer.

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2. a) What is meant by the term spyware? (1 Mark)

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b) State **two** ways of acquiring software.

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3. Briefly explain the emerging trends in micro computer technology in relation to size. (1 Mark)

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4. a) Distinguish between impact and non impact printers. (2 Marks)

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b) MICR and OMR

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5. Describe the following terms

a) Webpage (1 Mark)

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b) Blog (1 Mark)

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c) Hyperlinks (1 Mark)

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d) Web portal

(1 Mark)

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6. List **four** stages of data collection. (2 Marks)

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7. Explain the role of the following ICT specialist

a) Computer technician. (2 Marks)

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b) Information systems manager. (2 Marks)

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8. a) Give **four** advantages of DTP over a word processor. (2 Marks)

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b) Differentiate between the following

i) Kerning and tracking (2 Marks)

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ii) Margins and column guides (2 Marks)

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9. Distinguish between defragmentation of a disk and partitioning of a disk with reference to operating systems (2 Marks)

Partitioning

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Defragmentation

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10. Headache, back and neck pain may result from use of computers. State how each of them can be minimized (2 Marks)

Headache

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Back and neck pain

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11. Explain the meaning of the following terms as used in computer programming. (2 Marks)

i) Syntax

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ii) Semantics

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12. a) State **two** methods or tools that an analyst may use in a system design task. (2 Marks)

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b) Give **two** reasons why documentation must be done at each phase in system development cycle. (2 Marks)

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13. Explain the functions of the following network devices. (2 Marks)

Router

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Gateway

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14. Differentiate between baseband and broadband signal as used in networking (2 Marks)

a) Baseband signal

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b) Broadband signal

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15. Define the term simulation (1 Mark)

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SECTION B (60MARKS)

Answer question 16 and any other three questions from this section

17. a) What is the hexadecimal equivalent of 747_8

(3 Marks)

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b) Use one's compliment to solve the following sum: (2 Marks)

- 6₁₀

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c) State **two** reasons for using binary system in digital technology. (2 Marks)

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d) Explain the term attenuation as used in networking. (2 Marks)

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e) Explain the following terms as used in fibre optic cables. (4 Marks)

i) Single mode

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ii) Multi-mode

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f) Convert 7.125₁₀ to its binary equivalent. (2 Marks)

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18 i) Name **four** data types used in spreadsheets. (2 Marks)

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ii) Outline **five** advantages of an electronic spreadsheet over the traditional ledger. (5 Marks)

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iii) What is a chart wizard in spreadsheets? (1 Mark)

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iv) Name and explain the use of the following commands found in the spell check dialog box in reference to word processing (6 Marks)

a) Change

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b) Ignore once

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c) Add

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v) What is a template in word processing? (1 Mark)

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19 i) Describe **three** ways in which computers have positively impacted on education. (3 Marks)

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ii) The traffic lights serve as output devices for a computerized traffic system. Name the appropriate input device for this system. (1 Mark)

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iii) State **three** advantages of computer based simulation. (6 Marks)

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iv) Differentiate between a software engineer and a computer engineer. (2 Marks)

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v) Name **three** duties that are carried out by a web administrator. (3 Marks)

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20. i) List and briefly describe **three** components of a database system. (3 Marks)

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ii) Define the following terms as used in a database

a) Attribute (1 Mark)

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b) Database model (1 Mark)

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c) Macro (1 Mark)

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iii) Explain **three** types of database models. (6 Marks)

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iv) State **three** objectives of normalization. (3 Marks)

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