

NAME..... INDEX NO.....

SCHOOL..... Candidate's sign.....

Date.....

451/1
COMPUTER STUDIES
PAPER 1
(Theory)
JULY/AUGUST 2013
TIME 2½ HOURS.

MARANDA HIGH SCHOOL-MOCK

Kenya Certificate of Secondary Education (2013)

COMPUTER STUDIES

451/1

PAPER 1

INSTRUCTION TO CANDIDATES

- Write your name and index number in the spaces provided above
- This paper consists of **Two** sections A and B
- Answer **ALL** questions in section A
- Answer question 16 and any other **THREE** questions from section B
- All answers should be written in the spaces provided on the question paper

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

This paper consists of 12 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing

SECTION A (40 MARKS)
Answer ALL the questions in SECTION

1. (a) Distinguish between Computer Aided Instruction and Computer Aided Learning (2mks)

(b) Describe three advantages of using computers in banking (3mks)

2. Identify two reasons why a computer needs to be connected to a stable power supply (2mks)

3. Mention four things that are likely to cause strain- in the computer room (2mks)

4. State any four components found on the computer motherboard(2mks)

5. Give four human attributes used during biometric analysis (2mks)

6. George connected new multimedia speakers to his computer and tried to play his favorite music CD, but no sound came out. Suggest four problems that might have occurred (2mks)

7. Give any two peripheral devices which get their power supply through ports (2mks)

8. List any three techniques used by the operating system to perform job scheduling (3mks)

9. Raphael selected a paragraph in word processing. Explain what happened after pressing the following keys on the keyboard (3mks)

(i) Ctrl + X

(ii) Ctrl + U

(iii) Ctrl + V

10.

(a) Outline three qualities of a good programmer (3mks)

(b) State four computer related courses offered at National polytechnics in Kenya (2mks)

11. List any two methods used to secure data in a database (1mk)

12. A school intends to set-up an e-learning system. Briefly describe four problems that are likely to be encountered (2mks)

13. State the difference between pasteboard and printable page (2mks)

14. Outline four features of spreadsheet that are useful in financial modeling (4mks)

15. Briefly describe the two most common protocols for the internet (3mks)

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SECTION B (60 MARKS)

Answer Question 16 (Compulsory) and Any other THREE in this Section

16.

(a) Mention three characteristics of web scripting language (3mks)

(b) List three things which are considered as improper use of language rule which may cause syntax errors (3mks)

(c) Mumias sugar company pays casual employees based on the number of hours worked as follows

Less than 10 hours @ khs.100/= per hour

Up to 15 hours @ khs150/= per hour

More than 15 hours @khs200/= /per hour

(i) Write a pseudo code that will prompt the user to input the name, rate hours worked. The pseudo code should output the name, hours worked and the wage paid for five employees (4mks)

(ii) Draw a flowchart for the pseudocode (5mks)

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17.

(a) List two advantages of digital signals over analogue signals (2mks)

(b) If ASCII represent letter B as 1000010 suggest how letter P will be represented (2mk)

(c) Convert 57.4_{10} to its Octal equivalent (3mks)

(d) Determine the value of X in this equation (3mks)

$$X_2 + 1101_2 = 106_8$$

(e) Convert 7AEH to a decimal number (2mks)

(f) Use twos compliment to subtract 15 from 7 (2mks)

(g) State two use of hexadecimal notation in a computer (1mk)

18.

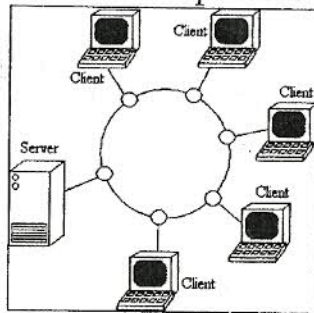
(a) List two protocols that operate at the application layer (1mk)

(b) Describe three main features of single mode fibre optic cable (3mks)

(c) Describe three factors to consider when choosing transmission media (3mks)

(d) Explain two techniques used to control data flow between the nodes in an Ethernet topology (2mks)

(e) Use the diagram below to answer the questions that follow



(i) Identify the topology represented by the diagram above (1mk)

(ii) Give two advantages of the above topology (2mks)

(iii) Explain how MSAU is used in (i) (1mk)

(f) State two limitation of networking (2mks)

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19.

(a) Highlight three circumstances that necessitate the development of new information systems (3mks)

(b) Describe three factors that cause system entropy(3mks)

(c) State two tools that a system analyst may use to design a system (1mk)

(d) Outline three factors that should be considered when sourcing for hardware and software resources required for a new system (3mks)

(e) Name two circumstances in which it is better to use a Questionnaire than an Interview for gathering information(2mk)

(f) State three reasons why users may resist the introduction of an information system in their place of work (3mks)

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(iii) Explain how MSAU is used in (i) (1mk)

(f) State two limitations of networking (2mks)

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