

NAME: _____

INDEX NO. _____

CANDIDATES' SIGNATURE _____

DATE: _____

451/1

PAPER 1

(THEORY)

JULY / AUGUST 2013

2 ½ HOURS

KIKUYU DISTRICT INTERSCHOOLS EVALUATION
KENYA CERTIFICATE OF SECONDARY EDUCATION

COMPUTER

PAPER 1

(THEORY)

Instructions to students

- 1) Write your name and index number in the spaces provided above
- 2) Sign and write the date of examination in the spaces provided above
- 3) This paper consist 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 Examiner's use only

Section	Question	Candidate's score
A	1-15	
	16	
	17	
	18	
	19	
	20	
TOTAL SCORE		

SECTION A (40 MARKS)

Answer all the questions in this section in the spaces provided

1. Define the following computer terms.

(i) Spooler (1mk)

.....
.....

(ii) Internet (1mk)

.....
.....

2. Munias Sugar Company is now unable to cope with the manual filing system of storing employees' details in a filing cabinet and is considering using a computerized system for details of its employees.

a) State:

(i) Two likely problems the company is now facing with the manual filing system. (2mks)

.....
.....
.....

(ii) Two requirements which the company must meet for the success of the computerized system. (2mks)

.....
.....
.....

(iii) Three types of files that you would recommend for the company for holding data for the computerized system. (3mks)

.....
.....
.....
.....

3. Give the DOS commands for:

a) Deleting a file. (1mk)

.....
.....

b) Creating a new directory. (1mk)

.....
.....

c) Listing files in a given directory. (1mk)

.....
.....

4. List two functions of each of the following network devices.

a) Hub

(2mk)

.....
.....

b) Transceiver

(2mks)

.....
.....

5. List three main data categories that have to be used for testing during program development.

(3mks)

.....
.....
.....

6. Monalisa entered the value 2789545456250 in a cell of a spreadsheet program. After pressing enter key, the cell displayed #####.

a) Explain why the numbers entered were not displayed as expected.

(1mk)

.....
.....

b) Suggest what you would do to correct the situation so that numbers entered are displayed as expected.

(2mks)

.....
.....
.....

7. Dan Karisa made an internet booking for his flight to Kampala.

a) Highlight two advantages of using internet booking rather than by telephone?

(2mks)

.....
.....
.....

b) What type of processing took place during internet booking and why?

(2mks)

.....
.....
.....

8. State the type of file organization that would be applicable to:

a) Text file stored on a CD.

(1mk)

.....
.....

b) Binary file stored on a flush memory disk. (1mk)

.....
.....

9. A program in a high level language has two variables; **A** of type integers and **B** array of type integer. State the difference between variables **A** and **B**. (2mks)

.....
.....
.....
.....

10. Explain the difference between:-
a) System software and application programs. (2mks)

.....
.....
.....

b) Digital and analogue computers. (2mks)

.....
.....
.....

11. Explain the term artificial intelligence as used in computing. (1mk)

.....
.....

12. What is DBMS? (1mk)

.....
.....

13. Highlight the main importance of a drop cap in a document. (1mk)

.....
.....

14. Explain why Two's compliment is preferred to one's complement in computing. (1mk)

.....
.....

15. Output from the computer can normally be in several forms. Give the difference between the following methods:

a) Microfiche and Microfilm. (1mk)

.....

b) Soft copy and hard copy. (1mk)

.....

SECTION B (60 MARKS)

Answer question 16 and any other three questions from this section

16. a) (i) Define the term system development cycle. (1mk)

.....
.....

- (ii) A management of a company is at the output specifications requirement stage of their system development. Explain two factors you would advice them to consider when designing the output. (4mks)

.....
.....
.....
.....
.....

- b) The area of a right angled triangle is given by the formulae $A = \frac{1}{2} b \times h \text{ cm}^2$ where $h > 0$ is the height in cm and $b > 0$ is the base in cm.

Draw a flowchart that calculates the area of the triangle for correct entered values for the base and height. (10mks)

17. Andrew, Jane, David and zablon had tea, sausages and bananas for breakfast. They took one sausage, two sausages, three sausages and one sausage respectively. In addition, they took a cup of tea and two bananas. Tea, sausages and bananas cost Ksh. 10, 15, and 5 respectively.

a) By naming columns A, B, C ... and rows 1, 2, 3 ...

(i) Construct a worksheet showing the above information.

(7mks)

b) State the expression you would use to obtain:

(i) Total expenditure by David

(4mks)

.....

.....

.....

.....

.....

(ii) Total number of sausages taken

(2mks)

.....

.....

.....

.....

(iii) The cost of the cheapest item

(2mks)

.....

.....

.....

18. a) A computer star network is used in a single room of a travel agent. The network is used by a staff to answer enquiries about travelers.

(i) Draw a clearly labeled diagram of the physical topography of a star computer network. (4mks)

(ii) Which is the most appropriate method of data transmission in this network and give a reason? (1mk)

.....
.....

(iii) Some enquiries require a printed reply. What would be suitable to give a high quality output? (1mk)

.....
.....

(iv) Give two advantages and one disadvantage of using this type of a computer network. (3mks)

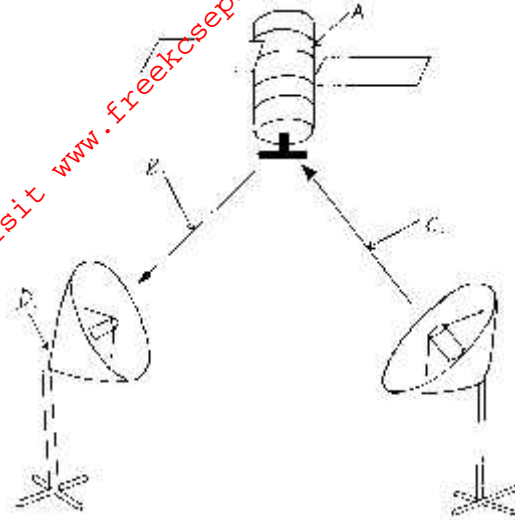
Advantages

.....
.....

Disadvantage

.....
.....

b) Study the diagram below and then answer the questions that follow.



(i) Give the name of the communication media depicted in the diagram below. (1mk)

.....


(ii) Give names to the parts indicated by A, B, C, and D. (4mks)

.....

(iii) Highlight one main advantage of the communication media above. (1mk)

.....

19. a) Sammy bought a computer system with the specifications given below. Use this information to answer the questions that follow.



- Intel® Core™ i3-550 processor
- 23" LED HD widescreen touch-screen
- 4GB DDR3 memory
- 750GB hard drive
- Windows 7 Home Premium
- built-in wireless networking
- wireless keyboard and mouse
- HP Photosmart

A

B

C

D

(i) Name the parts labeled A, B, C and D. (4mks)

.....

(ii) Name the processor. (1mk)

.....
.....

(iii) Give an example of non-volatile memory from the specification given above. (1mk)

.....
.....

b) (i) Name the operating system. (1mk)

.....
.....

(ii) Describe two functions of an operating system in a computer. (4mks)

.....
.....
.....
.....

c) (i) What is a volatile memory? (1mk)

.....
.....

(ii) What does wireless keyboard and mouse' mean? (1mk)

.....
.....

d) Write the following acronyms in full. (2mks)

(i) LED

.....
.....

(ii) DDR3

.....
.....

(iii) GB

.....
.....

(iv) HD

.....
.....

20. a) What is the difference between ASCII and EBCDIC (2 marks)

.....
.....
.....

b) Workout the following binary subtraction $1001_2 - 1101_2$

(2mks)

c) Convert 11.011_2 to a decimal number

(2mks)

d) Convert the octal number 1111_8 to its base ten equivalent

(2mks)

e) Carry out the following arithmetic in twos complement.

(4 mks)

$$48_{10} - 12_{10} \quad (\text{Show your working})$$

f) Write the BCD code for 29_{10}

(1mk)

g) Explain how data is represented on an optical storage media.

(2mks)

.....

.....

.....