

Name.....

Index No...../.....

School.....

Candidate's Signature.....

Date

451/1
COMPUTER STUDIES
(THEORY)
Paper 1
July/August 2009
2 ½ Hours

BORABU DISTRICT INTER-SECONDARY SCHOOL
JOINT EVALUATION TEST - 2009
Kenya Certificate of Secondary Education (K.C.S.E)

451/1
COMPUTER STUDIES
Paper 1
(THEORY)
July/August 2009
2 ½ Hours

INSTRUCTIONS TO CANDIDATES

- Answer all questions in section A.
- Answer question 15 (Compulsory) and any other **THREE** questions in section B.
- All answers should to be written in the spaces provided in the question paper

For Official use only.

Section	Question	Candidates Score
A	1 – 14	
B	15	
	16	
	17	
	18	
	19	
Total Score		

*This paper consists of 8 Printed pages.
Candidates should check the question paper to ensure that all the*

SECTION A (40 MARKS)

Answer all the questions in this section

1. a) Explain the role of the following

i) Computer programmer. (4mks)

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

ii) Software engineer (1mk)

.....
.....

b) i) What is electronic point of sale terminal? (1mk)

.....
.....

ii) Explain two advantages of using this system. (2mks)

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

iii) Give an application area of this system. (1mk)

.....
.....

2. Explain the purposes of the following files.

a) Back up (1mk)

.....
.....

b) Reference (1mk)

.....
.....

3. a) Perform the following binary arithmetic giving the answer in decimal notation. (2mks)

$$11101.011 + 111.111$$

b) State two application areas of virtual reality. (2mks)

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

4. What are the purposes of the following DOS commands (3mks)

a) RD

.....
.....

b) DIR *.*

.....
.....

c) CD

.....
.....

5. a) State three differences between wide area network and local area network (1½ mks)

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

b) Explain the terms below as used in computer network.

(i) Point to print (1mk)

.....
.....

(ii) Broadcast (1mk)

.....
.....

6. State three parts that constitute an array statement. (1½ mks)

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

7. You are provided with USB, Parallel and Serial cables. Which of the cables provided can be used to:
- a) Support variety of peripheral devices. (1mk)
-
-
- b) Transmit data in short distance. (1mk)
-
-
- c) Transmit data fast in long distance. (1mk)
-
-
8. The formula, $K20 + P & 18$ was typed in cell L21 and then copied to cell M24 of spreadsheet. Write a formula as it appears in cell M24. (2mks)
-
-
-
-
9. Distinguish between logical and physical files as used in computer. (2mks)
-
-
-
-
10. Tea processing zone wants to acquire new software,
- a) State three items that should accompany the software (1½ mks)
-
-
-
- b) State three purpose of word processing package. (1½ mks)
-
-
-
11. Give two differences of high and low level languages (2mks)

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

12. Define terms below

a) Nibble (1mk)

.....
.....

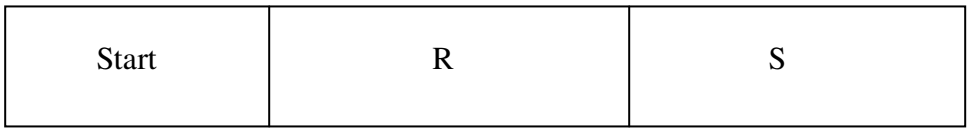
b) Bit (1mk)

.....
.....

c) Word (1mk)

.....
.....

13. The diagram below represents a task bar. Use it to answer the questions below.



a) Name the part labelled

(i) R (½ mk)

(ii) S (½mk)

b) Explain the difference between R and S (1mk)

.....
.....

14. a) Name two types of files in a computer (1mk)

.....
.....

b) Explain safety precaution in computer safeguarding

(i) Hardware (1mk)

.....
.....
(ii) Loss of computer programs (1mk)
.....
.....

SECTION B: 60MARKS

Answer question 15 is compulsory and any other three questions from this section.

15. a) Define the terms below

i) Algorithm (1mk)
.....
.....

ii) Pseudo code (1mk)
.....
.....

iii) Flowchart (1mk)
.....
.....

b) Draw a flowchart to compute the result of the following formula (5mks)

$$K = \frac{1}{(M+1)^2}$$

c) Write a program in high level language for a flowchart in b(above) (5mks)

d) Explain the purpose of program compilation before testing. (2mks)

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

16. You are provided with the following entries in the spreadsheet.

	A	B	C	D	E	F	G
			Months				
1	Items	Jan	Feb	Mar	April		
2	Shoes	500	500	500	500		
3	Pencils	400	300	600	700		
4	Books	100	200	150	350		
5	Ruler	900	760	350	102		
6	Rubber	60	80	200	450		

a) State the cell data type represented by

i) Cell A4 (1mk)

.....
.....

ii) Cell C 4 (1mk)

.....
.....

iii) Explain the difference between cell A 4 and C 4 (1mk)

.....
.....
b) Provide a formula for cell E5 that can be used to give 10% increase of cell E5 (2mks)

.....
.....
.....
.....
c) Using count function write an expression to determine the number of items greater 300 in the month of January (2mks)

.....
.....
.....
d) Explain two reasons why

i) Hypertext mark up language is not a true programming language.

.....
.....
.....
ii) State three examples of web scripting language. (3mks)

.....
.....
e) Differentiate between validation and verification as used in system development. (1mk)

.....
.....
.....
f) Explain two advantages of using modules during system implementation stage of development. (2mks)

.....
.....
17. a) i) Explain two advantages of acquiring micro-computers in schools (2mks)

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

ii) With an aid of well labeled diagram explain mesh network topology. (3mks)

iii) Explain two advantages and one disadvantage using this topology. (2mks)

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

b) Distinguish between:

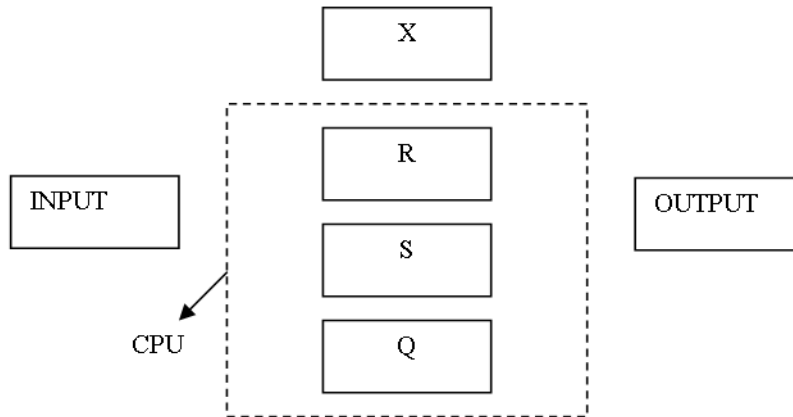
i) Data encryption and passwords. (1mk)

.....
.....

ii) Dry run and walk through (1mk)

.....
.....

c) The diagram below represents essential features of a computer system. Study the diagram and answer the question the follows:



i) Name the components

X

R

S

Q (4mks)

ii) In the diagram above indicate the direction of data flow using arrows. (2mks)

18. a) i) What is multimedia? (1mk)

.....
.....

ii) State two examples of multimedia system. (2mks)

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

b) Firestone Kenya purchased hardware components from World Computer services, Firestone Kenya later demanded a document of warranty.

i) What is a warranty? (1mk)

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

c) Define the terms below

i) Chatting (1mk)

.....
.....

ii) Website (1mk)

.....
.....

iii) Search engine (1mk)

.....
.....

b) Explain the effect of information technology in:

i) Employment (2mks)

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

ii) Environment (2mks)

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