

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

451/1

Candidate's Signature.....

COMPUTER STUDIES

Date.....

2 ½ hours

KAMDARA FORM 4 JOINT EVALUATION EXAM

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

451/1

COMPUTER STUDIES

Paper 1

(THEORY)

July/Aug 2015

INSTRUCTIONS TO CANDIDATES

1. Write your name, school and index number in the spaces provided above.
2. Sign and write date of examination in the spaces provided above.
3. This paper consists of TWO sections A and B.
4. Answer ALL questions in section A.
5. Answer question 16 and any the THREE questions from section B
6. ALL answers should be written on spaces provided on the question paper
7. This paper consists of 12 printed pages
8. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL MARKS	

*This paper consists of 8 printed pages.
Candidates should check the question paper to ensure that all
Pages are printed as indicated and no questions are missing*

SECTION A: (40MARKS)

Answer all questions in the spaces provided.

1. Define user friendliness as used in software selection. (1 mark)
.....
.....
2. (a) Describe a hardcopy output (1 mark)
.....
.....
(b) Name two hardcopy output devices. (1 mark)
.....
.....
3. Distinguish between the following spreadsheet terminologies.
(a) Count and Count If (2mark)
.....
.....
(b) Function and Formula (2marks)
.....
.....
4. (a) Describe the term hyperlink as used in internet. (2 marks)
.....
.....
(b) State two advantages of E-mail over postal mail. (2 marks)
.....
.....
5. Explain two types of optical scanners. (2 marks)
.....
.....
6. What does the following terms means used in database systems.
(a) Normalisation (1 marks)
.....
.....

(b) Foreign key (1 marks)

.....
.....

(c) Data Integrity (1 marks)

.....
.....

7. (a) Define the term artificial intelligence. (2 marks)

.....
.....

(b) List three application areas of artificial intelligence. (3 marks)

.....
.....

8. Outline two ways in which a computer can be used in schools. (2 marks)

.....
.....

9. State two health issues that may result from prolonged use of computers. (2 marks)

.....
.....

10. (a) What are pixels? (1 marks)

.....
.....

(b) What is the main advantage of USB(Universal Serial Cables) over both serial and parallel cables and ports. (1 marks)

.....
.....

11. Define the following terms as used in disk management.

(a) Formatting (1 marks)

.....
.....

(b) Compressing (1 marks)

.....
.....

(c) Defragmentation

(1 marks)

.....
.....

12. (a) Define desktop publishing.

(1 marks)

.....
.....

(b) Explain one purpose of desktop publishing.

(1 marks)

.....
.....

13. Convert 324_8 to its hexadecimal equivalent.

(2 marks)

14. (a) Explain one type of computational errors in data processing.

(1 marks)

.....
.....

(b) Briefly explain multi-processing as used in data processing.

(2 marks)

.....
.....

15. Describe the following computer crimes.

(a) Piracy

(1 marks)

.....
.....

(b) Hacking

(1 marks)

.....
.....

(c) Trespass

(1 marks)

.....
.....

SECTION B (60 Marks)

*Answer question 16 and any other **three** questions from this section.*

16. (a) Define the term algorithm.

(2 mark)

.....
.....

(b) Outline four advantages of high level languages.

(4 marks)

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

(c) Nairobi Chemist is a company that deals with drugs in the town centre. The company pays its employees depending on the hours they work. Every employee must work for a minimum of 40 hours. Normal rate applies to the first 40 hours, overtime rate applies to the hours in excess of 40 hours worked.

(i) What is the formula for calculating the total pay?

(1 mark)

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

(ii) Write a pseudo code that can be used to get the total pay, given the total pay is calculated using the formula above. (8marks)

17. (i) Distinguish between a system analyst and a programmer. (2 marks)

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

(ii) Define a reservation system. (2 marks)

.....
.....

(iii) List three job opportunities that are available in the field of computer software. (3 marks)

.....
.....
.....
.....
(iv) Discuss three impacts of e-business on marketing in Kenya today. (6 marks)

.....
.....
.....
.....
(v) Name two database search tools that are provided by Ms Access. (2 marks)

18. (a) Explain any two file organisation methods. (4 marks)

.....
.....
.....
.....
(b) State and explain the first five phases in the systems development life cycle (SDLC) in their logical sequence. (5 marks)

(c) Give two advantages and two disadvantages of questionnaires as a way of gathering information.

(4 marks)

.....

.....

.....

.....

.....

.....

d) Explain two types of errors that can be encountered when testing a program.

(2 marks)

.....

.....

.....

.....

19. (a) Explain the difference between the printing of multiple pages and multiple copies

(2 marks)

.....

.....

.....

.....

(b) What is the function of format painter?

(1 mark)

.....

.....

(c) Explain why a computer cannot work without an operating system.

(2 marks)

.....

.....

.....

.....

(d) Use the worksheet given below to answer the questions that follow.

	A	B	C	D	E
1	ITEMS	COST	QUANTITY	TAX	TOTAL
2	BREAD	50	6		
3	SUGAR	100	10		
4	BLUEBAND	150	7		
5	CHOCOLATE	140	3		
6	TEA LEAVES	120	7		
7	SOAP	120	4		
8	UNGA	104	8		

- i) Write a formula to calculate the TAX charged on each item based on the below criteria. It is calculated as a percentage of the COST. (3 marks)

QUANTITY	%TAX
>=10	25
4-9	18
<4	0

- ii) Write a formula to calculate the TOTAL FOR BREAD. (2 marks)

.....

.....

.....

.....

- iii) Write the formula for TOTAL written in (ii) above as it will appear when copied to cell E8. (2 marks)

.....

.....

.....

.....

iv) Write a formula that returns the sum of the TOTAL of all the items whose TAX is 0. (3 marks)

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

20. a) Briefly describe the following terms as used in networking

i) Data communication (1 mark)

.....
.....

ii) Simplex (1 mark)

.....
.....

iii) Remote communication (1 mark)

.....
.....

iv) Bridge (1 mark)

.....
.....

b) State and explain four advantages of using fibre optic cable, in computer network. (4 marks)

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

c) State the function of each of the following:

i) Network interface cable (1 mark)

.....
.....

ii) Modem (1 mark)

.....
.....

d) State two advantages and one disadvantage of bus network topology.

(3 marks)

.....

.....

.....

.....

e) State two advantages of wireless networks.

(2 marks)

.....

.....

.....

.....