

NAME _____

INDEX NO. _____

SCHOOL _____

SIGNATURE _____

DATE _____

451/1

COMPUTER STUDIES

PAPER 1

THEORY

July, 2017

TIME: 2½ HOURS

KITUI COUNTY MOCK

END OF TERM II FORM FOUR EXAMINATION, 2017

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

451/1

COMPUTER STUDIES

PAPER 1

THEORY

TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES:

- Write your name, index number and school in the spaces provided above.
- Write the date of examination and sign in the spaces provided.
- This paper consists of **two** sections.
- Answer **all** the questions in section **A**.
- Answer question **16** (compulsory) and **any other three** questions from section **B**.
- All answers **must** be written in the spaces provided in this question paper.
- *This paper consists of 10 printed pages*
- Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	ACTUAL SCORE
A	1 – 15	40	
B	16	15	
	17	15	
	18	15	
	19	15	
	20	15	
TOTAL SCORE			

SECTION A (40 MARKS)

Answer all the questions in this section in the spaces provided

1. State the **two** functions of the control unit. (2 marks)

2. Explain **four** reasons which make microcomputers suitable for personal computing work. (2 marks)

3. State the functions of the following keyboard key combinations. (3 marks)
 - a) CTRL + ESC

 - b) ALT + F4

 - c) CTRL + ALT + DEL

4. Distinguish between an integrated software and a software suite. (2 marks)

5. Differentiate between embedded computers and dedicated computers. (2 marks)

6. Give **three** reasons why a company may prefer a tailor made software over off the shelf software. (3 marks)

7. Explain the function of the following registers.

a) Instruction registers

b) Address registers

8. a) Explain how a computer system can be protected from intruders. (2 marks)

b) State any **two** laws governing protection of information. (2 marks)

9. a) What is the meaning of graphics as used in word processing? (1 mark)

b) Give **two** sources of graphics in the computer. (2 marks)

10. a) State the cursor action when the following keyboard keys are pressed. (2 marks)

i) Delete key

ii) Insert key

iii) Pgup (page up) key

iv) Pgdown (page down) key

11. Identify the parts of the following e-mail address labeled A, B, C and D. (4 marks)

Ict@kenyaonline.co.ke
↑ ↑ ↑ ↑
A B C D

A _____

B _____

C _____

D

12. a) What is a search engine? (1 mark)
-
-
- b) Give **four** examples of search engines you know. (2 marks)
-
-
-
-
13. a) Define the following terms as used in a worksheet. (2 marks)
- i) Columns
-
-
- ii) Rows
-
-
- b) Distinguish between absolute cell reference and relative cell reference. (2 marks)
- Relative Referencing
-
-
-
- Absolute referencing;
-
-
-
14. a) State **one** data processing file. (1 mark)
-
- b) Explain the function of the file named above in 14 (a). (2 marks)
-
-
-
-
15. Give **one** reason to the growth of communication industry in Kenya. (1 mark)
-
-

SECTION B: (60 MARKS)**Answer question 16 and any other three questions from this section**16. a) List **two** examples of;

i) Third generation languages. (2 marks)

ii) Object oriented languages. (2 marks)

b) Define (2 marks)

i) Object code

ii) Source code

c) Differentiate between a compiler and an interpreter. (2 marks)

d) A car rental firm leases its cars for Kshs. 2500.00 per day. The manager gives a discount based on the number of days that the car is rented. If the rental period is greater than or equals to 7 days then a 25% discount is given. Write a pseudocode to accept a car number and the rental period, and calculate the total amount earned by the company when a car is leased. (7 marks)

17. a) State **three** parameters that determines the magnitude of a number.

(3 marks)

b) Using two's complement, show how the arithmetic below would be carried out on a 8 - bit computer system $(+54) - (+29)$.

(5 marks)

c) Using one's complement, perform the following binary arithmetic leaving the answer in decimal notation.

(5 marks)

$$1101_2 - 100101_2$$

d) Differentiate between a word and a word length.

(2 marks)

18. a) State the meaning of the following operating systems terms:

i) Interrupt

(1 mark)

ii) Trouble shooting.

(1 mark)

iii) Clock speed.

(1 mark)

b) Differentiate the following.

(4 marks)

i) Disk compression and disk defragmentation.

ii) Disk partitioning and disk formatting.

c) The operating system has several functions in a computer.

Explain how the operating system performs the following functions.

i) Error handling

(3 marks)

ii) Resource control and allocation

(3 marks)

d) Computer can fail to work due to problems associated with operating system.

Explain how the following problems can be corrected.

(2 marks)

i) Runtime problems

ii) Corrupted registry

19. a) Giving examples, differentiate between hard system and soft system.

(4 marks)

b) Explain the following system characteristics. (2 marks)

i) System control.

ii) Sub-systems

c) i) What is a closed system? (1 mark)

ii) Give **three** characteristics of a closed system. (2 marks)

d) Why is feedback necessary in a system? (2 marks)

e) Draw a diagram to show a system that is controlled through feedback. (4 marks)

20. a) Define the term Multiplexing as used in networking.

(1 mark)

b) Describe the following signal wave properties.

(3 marks)

i) Frequency of a wave

iii) Wavelength

iv) Amplitude

c) Use a diagram to distinguish between ring and star network topologies.
marks)

(2

d) Give **one** advantage and **one** disadvantage of each of (c) above.

(4 marks)

e) i) What is virtual reality? (1 mark)

ii) Describe **four** essential equipment to achieve virtual reality. (4 marks)
