

Name Index No.

451/1
COMPUTER STUDIES
Paper 1
(Theory)
Time: 2½ Hours

Candidate's Signature

Date

Kenya Certificate of Secondary Education

COMPUTER STUDIES
Paper 1
Time: 2½ Hours

INSTRUCTIONS TO CANDIDATES

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

For Examiner's Use Only

Section	Question	Score
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

SECTION A : (40 MARKS)
Answer all questions in this section.

1. State three classification of micro-computers. (3 marks)

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2. Give and explain two types of booting. (4 marks)

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3. List six factors one would consider when selecting a data input device. (6 marks)

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4. List four examples of computer output. (4 marks)

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5. Differentiate between digital and analog signals. (2 marks)

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6. Explain two precautions for handling storage media. (2 marks)

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7. State the role of a modem in communication. (1 mark)

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8. Define the following term :
Programming (2 marks)

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9. State four components of ICT (4 marks)

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10. a) Define the term booting. (1 mark)

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b) List down four functions of the Uninterruptible Power Supply (UPS) (4 marks)

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11. Give three examples of selection control structure. (3 marks)

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12. What do you understand by the following computing term ?
Artificial intelligence (1 mark)

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13. What is a peripheral device. (1 mark)

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14. Define the term publishing. (1 mark)

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15. Write the acronym DTP in full. (1 mark)

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SECTION B : (60 MARKS)

16. a) List four examples of fourth generation programming languages. (4 marks)

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b) Define the terms :

i) Flowchart (1 mark)

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ii) Algorithm (1 mark)

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iii)Pseudocode (1 mark)

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c) Draw a flow chart for a program that will allow the input of name of student marks obtained in 5 subjects. (Maths, Kiswahili, Computer and Biology). The program should calculate the total and average marks for each student and assign the grades depending on the average marks obtained as follows. (8 marks)

The program should then display each student's name, total marks and average grade.

Marks	Grade
80 - 100	A
70 - 79	B
60 - 69	C
50 - 59	D
Below 50	E

17. a) Define the term expert system. (2 marks)

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b) List any two ICT courses offered in Kenyan Universities today. (4 marks)

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c) Differentiate between job replacement and job displacement. (4 marks)

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d) State five qualities of a good system analyst. (5 marks)

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18. a) State five types of computer crimes. (5 marks)

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b) What is a computer virus ? (2 marks)

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c) State four ways through which computer viruses may be controlled. (4 marks)

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d) Differentiate between cracking and hacking. (4 marks)

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19. a) State and explain three types of computer networks. (6 marks)

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b) i) State five limitations of networking. (5 marks)

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ii) State four factors to consider when selecting computer hardware. (4 marks)

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20. a) State three reasons why a computer system use binary in representing data. (3 marks)

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b) Distinguish between a nibble and a byte. (2 marks)

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c) Compute the following equations using two's complement method. (6 marks)

i) $1101111_2 - 11010_2$

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ii) $1111001_2 - 11101111_2$

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iii) 34_{10} to binary

(2 marks)

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iv) $10101_2 - 110_2$

(2 marks)

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