



KCSE ACHIEVERS PREDICTION



451/1

Kenya Certificate of Secondary Education

COMPUTER STUDIES

Paper 1

(Theory)

Time-2 ½ Hours

Name.....Index(ADM) No.....class.....

Candidates Signature.....Date

INSTRUCTIONS TO CANDIDATES

- (a) Write your Name and Index/Adm Number in the spaces provided.
- (b) This paper consists of TWO sections: A and B
- (c) Answer ALL the questions in section A
- (d) Answer question 16 and any other **THREE** questions from section B
- (e) All answers should be written in the spaces provided in the question paper.
- (f) This paper consists of 14 printed pages.
- (g) Do not remove any pages from this booklet.
- (h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- (i) Candidates should answer the questions in English.

For Examiners use only.

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



SECTION A (40 MARKS)
ANSWER ALL QUESTIONS FROM THIS SECTION

1. Give **FOUR** characteristics of first generation computers? (2marks)

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2. a) Why are powder fire extinguishers not allowed in the computer room? (1 mark)

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b) What is the difference between delete and backspace keys? (2 marks)

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3. Give **FOUR** factors that describe the ideal environment for a computer to work properly. (2marks)

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4. Give **TWO** advantages of using sound output devices (2marks)

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5. Give **TWO** application areas of OMR (2marks)



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6. a) Distinguish between primary and secondary storage devices. (2marks)

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7. State FOUR devices that support multimedia capability on a computer (2marks)

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b) Differentiate between the terms: volatile memory and non-volatile memory. (2marks)

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8. Differentiate between misreading and transposition errors in data processing (2marks)

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9. What is the function of the power supply unit found in the system unit? (2marks)



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10. (a) Name **FOUR** approaches that may be used to replace a Computerized Information system. (2 marks)

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(b) Which of the approaches named in (a) above is appropriate for critical systems? Explain. (2 marks)

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11. Terry intends to download a movie from the Internet. State the **two** factors that may determine the total time taken to complete the download. (2 Marks)

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12. A lecturer keeps the following student details in a database: name, age, course.



(a) Write an expression you would use to compute the year of birth of a student using this year as the current year. (2 marks)

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(b) What query expressions would the lecturer use to list the students whose age is above 15 years and below 25 years? (2 marks)

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13. a) Explain each of the following roles performed by an operating system

i. Memory management (2 marks)

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ii. Interrupt handling (2 marks)

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14. A computer teacher has put a rule that flash disk should not be used in the computer laboratory

(a) Give a reason for the rule (1 mark)

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(b) State two alternatives that can be used to achieve the same objective (1 marks)

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15. (a) What is a utility software? (1 mark)

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(b) Give **FOUR** examples of utility software (2 marks)

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SECTION B (60 MKS)

Answer question 16 and any other 3 questions.

16. a) i) What is system maintenance? (2marks)

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b) Differentiate between absolute and relative cell referencing. (2marks)

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c) The formula $\$A\$4 + C\$5$ is typed in cell D4 and copied to cell H6. Write down the formula as it would appear in cell H6. (2marks)

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d) Generate output for the following pseudo code (4marks)

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START
  X= 5
  WHILE (X<15) DO
    Y= X +2
    X=X+3
    PRINT X,Y
  ENDWHILE
  PRINT ("DONE',X)
STOP
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e) Draw a flowchart for the above pseudo code (5 marks)

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17. a) Using 10-bits binary number system, perform the following decimal operation using two's complement. (4 marks)

$129_{10} - 128_{10}$

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b) Convert the following into binary $6CD_{16}$ (2 marks)

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c) Perform the following binary arithmetic $11001.101 + 1110.011$ (2 marks)

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d) Define the following terms. (3 marks)

i) Record

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(4 marks)

(2 marks)

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(3 marks)



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ii) Proprietary

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iii) Open source

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c) i) Define the term E-commerce (2marks)

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ii) List down **TWO** advantages of e- commerce as used in modern business environment (2marks)

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d) Describe **THREE** ways how computing has been applied to each of the following areas:

i) Reservation systems. (3 marks)



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ii) Law enforcement (3 marks)

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19. (a) i) Name any **TWO** types of non-printable guides in DTP. (1mark)

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ii) Explain the functions of each of non-printable guides in (19 (a)i) above (4 marks)

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[illegible][illegible][illegible]

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20.(a) List **THREE** advantages of wireless communication over wired communication. (3 marks)

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(b) Using a Diagram, describe the following signals and state where each is applied in network communication:

(i) Analog; (2 marks)

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(ii) Digital. (2 marks)

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(c) Name the **TWO** types of coaxial cables.

(2 marks)

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(d) (i) Define the term network protocol.

(1 mark)

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(e) List **FOUR** internet protocols

(2 marks)

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(f) Describe star topology as used in networking

(3 marks)

