



MASENO SCHOOL

2025 MOCK EXAMINATION

Kenya Certificate of Secondary Education



451 / 1 - COMPUTER STUDIES

Wednesday 16th July, 2025

2.00 p.m. - 4.00p.m.

Unique Identifier No.....

Signature.....

INSTRUCTIONS TO CANDIDATES

- a) Write your Unique Identifier Number at the top right hand corner of each printout.
- b) This paper consists **TWO** sections.
- c) Answer **ALL** questions in section **A**.
- d) Answer Question 16 and any other **THREE** Questions from Section **B**
- e) All answers **MUST** be written in the spaces provided on this question paper.
- f) This paper consists of 12 printed pages.

For Examiner's Use Only

Questions	Maximum Score	Actual Score
1-15	40	
16	15	
17	15	
18	15	
19	15	
20	15	
TOTAL		

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

1. State two reasons for the increased use of Laptop computers in modern workplaces (2marks)

2. What precautions would you take in the computer laboratory incase users are complaining of overheating and suffocation. (2marks)

3. Define the term phishing and explain how it poses threat to computer users (3marks)

4. List any three types of security threats that organisations face when using networked computer systems (3marks)

5.State three circumstances which may force an individual to acquire an impact printer instead of non-impact printer. (3marks)

6. Sam prepared a five-page brochure of Maseno School using Ms-publisher. He wanted to insert a school badge in each page of the publication. State two methods he may apply to execute this task. (2marks)

7. Javan Joe has recently secured a job at maseno university as a database administrator. Outline two roles Joe will be expected to perform. (2marks)

8. Explain the impact of Information Technology on organization in each of the following areas. (2 marks)
(a) Employment

(b) Environment

9. State four benefits of cloud storage in computing. (4marks)

10. Describe the functions of the following disk management operations.

(a) Defragmentation

(1mark)

(b) Partitioning

(1mark)

11. State four ways through which an organization can minimize threats to its data integrity. (4marks)

12. Give three reasons why people prefer in-house developed application programs to general-purpose application packages. (3marks)

13. State any three page formatting features in word processors

(3marks)

14. Five students Jane, Beryl, Baroness, Linda, and Jael scored the following marks in mathematics: 45, 76, 34, 65 and 45. The marks were recorded in cell C3 to C7. Write down the most appropriate function that can be used to give positions so that they can be awarded in descending order. (3marks)

15. List TWO human features used by Biometric systems installed in a computer to authenticate users

(2 marks)

**SECTION B: (60 MARKS) ANSWER QUESTION NUMBER 16 ANY OTHER THREE QUESTIONS
FROM THIS SECTION**

16. (i) Define the following terms as used in programming.

(a) Structured/procedural language

(3marks)

(b) Debugging

(c) Syntax

(ii) With an aid of a diagram differentiate between Repeat Until and While... Do loops.

(4 marks)

(iv) Study the pseudo code below and design its equivalent flowchart

(8marks)

Start

Count=1

For count =1 to 5 Do

Get Value 1 and Value 2

If Value 1 > Value2 Then

Maximum =Value1

Else

Maximum =Value2

Endif

Display Maximum

Count=Count+1

Stop

17. (i) The five-bit number 00101_2 is used to represent decimal number 5, show three methods of coding for negative 5. (3marks)

(ii) Convert the binary number 101011110101101110001_2 into its

(a) Octal equivalent (2marks)

(b) Hexadecimal (2marks)

(iii) Convert 10101.010101_2 to decimal (3marks)

(iv) Use 8-bit twos to subtract 35_{10} from 17_{10}

(3marks)

(v) Perform the following calculation: $110001_2 + 1111_2 - 11111_2$

(2marks)

18. (i) Define the term desktop publishing.

(2 marks)

(ii) List three nonprinting guides used in Desktop publishing

(3 marks)

(iii) Differentiate between fill and stroke as used in DTP

(2 marks)

(vi) Describe any three types of action queries.

(3 marks)

(iv) Describe the function of the following features of a query grid.

(a) Criteria

(1mark)

(b) Show

(1 mark)

(v) Mention three functions of database management software.

(3 marks)

19. a) (i) State the stage of system development life cycle in which each of the following activities take place

(3 marks)

a) Determination of the cost effectiveness of a system

b) Interviews

c) Staff are trained

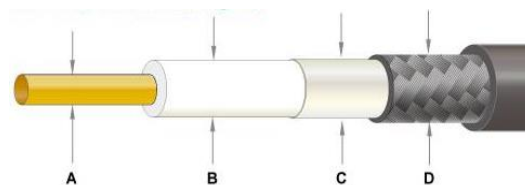
(ii) Outline any three ways in which an organization may switch from an old system to a new one.(3 marks)

b) The following are some of the phases in the systems development life cycle (SDLC): system analysis, system design, system implementation, system review and maintenance. State three activities that are carried out during the system implementation phase (4 marks)

c) Give three reasons why system maintenance phase is necessary in SDLC (3 marks)

d) State two instances where observation is not a viable method of gathering information during system analysis stage (2 marks)

20. Study the diagram below and answer the questions that follow.



(a) (i) Name the above cable as used in data communication media (1 mark)

(ii) Name the parts labeled A, B, C and D (4 marks)

(iii) Highlight any Three advantages of the above cable.

(3 marks)

(b) With the aid of a diagram, distinguish between star topology and ring topology giving one disadvantage of each.

(4 marks)

(c) List any three data communication devices used in networking

(3 marks)

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