Name …… Admission Number …….

Class …… Index No: …….. Candidate's Signature…….

ACK MASENO SOUTH DIOCESE
TERM 1, 2026
Kenya Certificate of Secondary Education

451/1
COMPUTER STUDIES – PAPER 1
March/April 2026 – 2 hours

451 / 1 - Computer Studies Paper 1

Thursday 19TH March 2026

Time: 2.00 p.m – 4.30 p.m

ACK MASSSA JOINT EXAMINATIONS TERM 1 2026

Instructions to candidates

(a) Write your name and index number in the spaces provided above

(b) Sign and write the date of examination, name of your school and stream in the spaces provided above.

(c) This paper consists of two sections section A and section B

(d) Answer all questions in section A

(e) Answer question 16 and any other three questions in section B

(f) All answers should be written in the spaces provided

(g) Non-programmable electronic calculators may be used

(h) This paper consist of 13 pages

(i) Candidates should check the question paper to ascertain that all pages are printed as indicated and that no question(s) are missing.

(j) Candidates should answer the questions in English.

For examiner's use only

Section	Question	Maximum Score	Candidate Score
A	1-15	30	
B	16	20	
		20	
		20	
	Total Score	90	

SECTION A (40 marks)

*Answer **all** the questions from this section in the spaces provided.*

1. State **one** advantage and one disadvantage of a laser printer. (2 marks)

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2. State any three reasons why people may resist the introduction of computers at their place of work. (3 marks)

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3. Write the following abbreviations in full. (3 marks)

(i) BCD

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(ii) ASCII

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(iii) EBCDIC

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4. State two methods of minimizing dust in a computer laboratory. (2 marks)

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5. Distinguish between system software and application software. (2 marks)

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6. The first column in the table below contains the formulae as stored into the cell F10 of a spreadsheet. Enter the formulae, as they would appear when copied to the cell J20 of the same spreadsheet. (3 marks)

Formula in F10	**Formula in J20**
=D10* E10	
=A$ 25	
=$ D$13	

7. Wallace, a computer technician installed a new printer. After installation he was required to restart the computer

(a) Give a reason why restarting the computer was necessary. (1 mark)

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(b) Name two reasons a computer may be restarted. (2 marks)

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8. A password is a secret code for protecting data in a computer system against unauthorized access. State two features of a good password. (2 marks)

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9. Differentiate a monitor and a printer in terms of information output (2 marks)

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10. Describe the following concepts as used in applications.

(a) Automatic recalculation (1 mark)

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(b) "What if" analysis (1 mark)

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(c) Thesaurus (1 mark)

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(d) Word wrap (1 mark)

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11. Achievers school principal wanted to connect the computers in the school to the internet.

(a) Name three requirements for internet connectivity (3 marks)

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(b) Give four services the school would get from the internet. (2 marks)

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12. Explain the following errors encountered during data processing (2 marks)

(a) Transposition errors

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(b) Misreading errors

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13. Differentiate between clicking and double clicking (2 marks)

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14. When purchasing a computer system the clock speed, RAM size, Hard Disk size and monitor size are often quoted. State the unit for measuring: (2 marks)

(a) Clock speed .....

(b) RAM size .....

(c) Hard Disk size .....

(d) Monitor size .....

15. (a) Name four paragraph formatting features applied in a word document. (2 marks)

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(a) State one function of the ENTER key on the keyboard. (1 mark)

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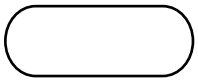
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SECTION B (60 marks)

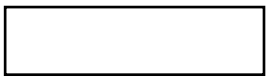
*Answer question 16 and any other **THREE** questions from this section in the space provided.*

16. (a) State the use of the following flowchart symbols (3 marks)

(i) 

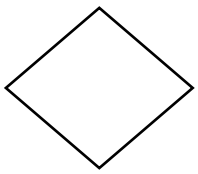
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(ii) 

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(iii) 

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(b) Below is an algorithm that is used to compute the values of W, X and Y.

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Start
        A = 10
        B = 8
        INPUT M
        IF M >= 25
                W = A * B
                X = A + B
                Y = A + B +W + Y
        ELSE
                W = A – B
                X = A
                Y = W *X
        END IF
        PRINT W, X, Y
Stop.
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From the algorithm determine the output if the value of M is:

(i) **2** (3 marks)

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(ii) **30** (3 marks)

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(c) Draw a flowchart for the algorithm in question 16 (b) (6 marks)

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17. (a) Define an information system. (1 mark)

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(b) Give two roles of a system analyst. (2 marks)

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(c) Explain the following characteristics of a system.

(i) Holistic thinking (2 marks)

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(ii) Subsystems (2 marks)

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(iii)Inputs and outputs (2 marks)

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(d) Name two methods of gathering information during system development process. (2 marks)

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(e) Explain two changeover strategies that may be used to implement a new system. (4 marks)

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18. (a) Differentiate between

(i) primary key and an Index (2 marks)

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(ii) alignment and orientation (2 marks)

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(b) State the purpose of the following objects in databases. (4 marks)

i. Tables

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ii. Queries

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iii. Reports

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iv. Forms

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(c) The figure below shows a worksheet containing information a shopkeeper records on his sales use it to answer the questions that follow.

	A	B	C	D
1	**ITEM NAME**	**ITEMS IN STOCK**	**ITEMS SOLD**	**BALANCE**
2	RICE	30	12	
3	TEA LEAVES	17	10	
4	BREAD	23	15	
5	TOOTHPASTE	10	2	

(i) Write a formula to calculate the balance of **BREAD** (1 mark)

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(ii) Write a function to display the number of items in stock greater than 20. (3 marks)

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(iii)Give two cells that contain label data type in the above worksheet. (1 mark)

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(d) Name four field data types used in database table design. (2mks)

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19. (a)Describe two ways in which a positive number and a negative number can be represented in a computer. (2 marks)

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(b) Describe the octal number system (2 marks)

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(c) Convert each of the following to the number system indicated

i. 1101.1011_2 to decimal number (3 marks)

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ii. 20.6875_{10} to binary number (3 marks)

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(d) Using 8-bit twos complement perform the following arithmetic

$25_{10} - 12_{10}$ (5 marks)

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20. (a) Distinguish between formatting a disk and partitioning a disk with reference to the operating system. (4 marks)

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(b) State four properties an operating system displays about a file. (2 marks)

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(c) Describe the following functions of the operating system (4 marks)

(i) Error handling

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(ii) Job scheduling

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(d) Name two advantages of standard software over in house developed software. (2 marks)

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(e) State three examples of solid state storage devices in the market today. (3 marks)

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