NAME: …… ADM NO: …… CLASS: ……
SCHOOL: ……SIGN…….DATE……

GRADE 10 COMPUTER STUDIES
OPENER EXAM TERM 2, 2026
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. ***Write your name, admission number and class in the spaces provided above.***
2. ***This paper consists of FIVE compulsory questions.***
3. ***Answer ALL questions.***
4. ***All answers must be written in the spaces provided in this paper.***
5. ***Show all necessary working for calculations.***
6. ***This paper consists of 12 printed pages. Check that all pages are printed and no questions are missing.***

1.(a) Define the term computer system. **(2 marks)**

(b) State the function of each of the following hardware components:

(i) Central Processing Unit (CPU). **(2 marks)**

(ii) Random Access Memory (RAM). **(2 marks)**

(iii) Read Only Memory (ROM). **(2 marks)**

(c) Classify computers according to size and processing power, giving ONE example for EACH class. **(6 marks)**

(d) Distinguish between input devices and output devices, giving TWO examples of each. **(6 marks)**

2.(a) Define the term data representation as used in computers. **(2 marks)**

(b) Convert the following numbers as instructed. Show all working clearly.

(i) Convert 110101_2 to decimal. **(3 marks)**

(ii) Convert 175_{10} to binary. **(3 marks)**

(iii) Convert $2AF_{16}$ to decimal. **(3 marks)**

(iv) Convert 89_{10} (decimal) to hexadecimal. **(3 marks)**

(c) State TWO reasons why computers use the binary number system. **(2 marks)**

(d) Complete the table below by filling in the missing values. **(4 marks)**

Decimal	Binary	Octal	Hexadecimal
10	1010	12	A
25	……	……	19
……	11110011	363	……
255	……	377	……

3.(a) Differentiate between system software and application software, giving TWO examples of each. **(6 marks)**

(b) State FOUR functions of an operating system. **(4 marks)**

(c) Explain the meaning of each of the following operating system concepts:

(i) Multitasking. **(2 marks)**

(ii) User Interface. **(2 marks)**

(d) Identify THREE types of user interfaces and describe how a user interacts with the computer through each type. **(6 marks)**

4.(a) Define the term computer network. **(2 marks)**

(b) State THREE advantages of networking computers in an organisation. **(3 marks)**

(c) Describe FOUR types of network topologies, stating ONE advantage and ONE disadvantage of EACH. **(8 marks)**

(d) Distinguish between the following pairs of terms:

(i) LAN and WAN. **(2 marks)**

(ii) Intranet and Internet. **(2 marks)**

(e) State THREE network devices used to connect computers in a network, stating the function of each. **(3 marks)**

5.(a) Define the term spreadsheet. **(2 marks)**

(b) Identify the components of the spreadsheet screen interface listed below:

(i) A rectangular box formed by the intersection of a row and a column. **(1 mark)**

(ii) The bar that displays the address of the currently selected cell. **(1 mark)**

(iii) A set of cells arranged in a horizontal line identified by a number. **(1 mark)**

(iv) A set of cells arranged in a vertical line identified by a letter. **(1 mark)**

(c) Given the spreadsheet below, write the formula/function that would be entered in the indicated cells:

	A	B	C	D	E
1	Student Name	Maths	English	Science	Total Score
2	Kamau James	78	65	80	=?
3	Achieng Faith	90	88	74	=?
4	Mutua Brian	55	70	60	=?
5	AVERAGE	=?	=?	=?	
6	HIGHEST SCORE	=?			
7	LOWEST SCORE	=?			

(i) Cell E2 (Total Score for Kamau). **(1 mark)**

(ii) Cell B5 (Average for Maths). **(2 marks)**

(iii) Cell B6 (Highest score in Maths). **(2 marks)**

(iv) Cell B7 (Lowest score in Maths). **(2 marks)**

(d) Explain the difference between a formula and a function in a spreadsheet application. **(2 marks)**

(e) State THREE ways in which a spreadsheet can be used in a school environment. **(3 marks)**

END