# REPUBLIC OF RWANDA

MINISTRY OF EDUCATION

NATIONAL EXAMINATION AND SCHOOL ASSESSMENT (NESA)

## Senior 5 Computer Science – Paper 1

Computer Systems  
Time: 2 Hours

INSTRUCTIONS TO CANDIDATES:  
- Read all instructions carefully.  
- Answer all questions in Section A and B, and only one question from Section C.  
- Write your answers in the spaces provided.  
- Calculators are not allowed.

## SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS)

Choose the correct answer for each of the following questions. Each question carries 1 mark.

1. Which of the following is NOT a function of an operating system?  
 a) Memory management b) File management c) Web browsing d) Process scheduling

2. The component responsible for performing arithmetic and logic operations in the CPU is:  
 a) Control Unit b) Arithmetic Logic Unit (ALU) c) Memory Unit d) Register

3. ROM stands for:  
 a) Read-On Memory b) Random Output Memory c) Read-Only Memory d) Run-On Memory

4. Which of the following is an example of application software?  
 a) Microsoft Word b) Linux c) BIOS d) Device Driver

5. What does POST stand for in computer systems?  
 a) Power On Self Test b) Program Output System Terminal c) Post Office Service Transfer d) Power Output Secure Transfer

6. A motherboard is best described as:  
 a) External input device b) Temporary storage device c) Main circuit board of a computer d) Communication port

7. Which port is commonly used to connect a keyboard to a desktop computer?  
 a) USB b) VGA c) HDMI d) PS/2

8. One of the major disadvantages of using SSDs compared to HDDs is:  
 a) Lower speed b) Higher cost per GB c) More noise d) Higher power consumption

9. Which of these is a volatile type of memory?  
 a) ROM b) SSD c) HDD d) RAM

10. What type of system software helps translate high-level programming languages into machine code?  
 a) Compiler b) Browser c) Editor d) Spreadsheet

## SECTION B: SHORT ANSWER QUESTIONS (30 MARKS)

Answer all questions in the spaces provided. Each question carries the indicated marks.

11. Define the term computer system. (2 marks)

12. List and explain any three components of the CPU. (6 marks)

13. Differentiate between primary memory and secondary storage, giving one example for each. (4 marks)

14. Mention four input devices and describe how each one functions. (8 marks)

15. Briefly explain the role of the BIOS during the booting process. (4 marks)

16. Why is system software essential for a computer system to function? (2 marks)

17. Explain the purpose of the device driver in a computer. (4 marks)

## SECTION C: STRUCTURED/ESSAY QUESTIONS (Choose ONE question only) (20 MARKS)

EITHER

18. a) Explain the booting process of a computer, step by step. (10 marks)  
 b) Compare and contrast CLI (Command Line Interface) and GUI (Graphical User Interface) with examples. (10 marks)

OR

19. a) With examples, differentiate between hardware and software in a computer system. (10 marks)  
 b) Discuss the importance of preventive maintenance in computer systems and outline any five common preventive measures. (10 marks)

END OF EXAMINATION