KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN APPLIED COMPUTER SCIENCE SECOND SEMESTER 2023/2024
[JAN – APRIL, 2024]

ACMP 111:   COMPUTER HARDWARE

STREAM: Y1 S2   **TIME: 2 HOURS**

DAY: FRIDAY, 12:00 - 2:00 P.M.   **DATE: 05/04/2024**

INSTRUCTIONS

1. *Do not write anything on this question paper.*
2. *Answer question ONE (Compulsory) and any other TWO questions.*

QUESTION ONE

(a) Explain three organizational units of the Central Processing Unit (6 marks)

(b) The following table shows the common configuration error codes that occur at the end of the POST routines. correctly match the error codes and their corresponding meanings   (5 marks)

CONFIGURATION ERROR MESSAGE	MEANING
CMOS System Option Not Set	Failure of CMOS battery
CMOS Display Mismatch	System Configuration and Set up Failure
CMOS Memory Size Mismatch	Invalid configuration information
Press F1 to continue	Failure of Display type Verification
CMOS Time and Date Not Set	Failure of CMOS battery or CMOS checksum test

(c) Briefly explain the meaning of a device driver and state its function in a computer system. (4marks)

(d) Explain what you understand by a BAD SECTOR in hard drives and outline any Four Signs that Indicate Bad sectors in the Hard Drive (6marks)

(e) Differentiate between troubleshooting and diagnosis as used in hardware support and maintenance (4marks)

(f) A blue screen error is a blue screen that appears with an error code and then freezes the system. Outline Five common causes of a blue screen error (5marks)

QUESTION TWO

(a) Mr. Odhiambo disassembled his computer in order to blow dust from it.Explain Five any internal components he came a cross (10marks)

(b) Explain the concept of defragmentation as used in computer hardware maintence and thus highlight the steps of defragmentation (6 marks)

(c) Differentiate between the serial and parallel connection as used in computer hardware. (4marks)

QUESTION THREE

(a) Explain the concept of POST as used in computer hardware (4marks)

(b) Describe a device manager and clearly explain its functions in the computer system. (6marks)

(c) Explain what you understand by BIOS and state its functions in the computer system. (6marks)

(d) State four preventive maintenance routines (4marks)

QUESTION FOUR

(a) Explain what you understand by malware as used in computer hardware and highlight Six deadly effects of the malware (8marks)

(b) Melvine realized that the computer was unable to start up when he pressed the power button on. Explain what he needs to do in order to troubleshoot and fix/repair the computer. (8marks)

(c) Explain how you will address the problem of a computer whose windows is not booting properly. (4marks)

QUESTION FIVE

(a) Describe three classifications of computer software (6marks)

(b) Highlight typical symptoms associated with power supply failures (4marks)

(c) Using a diagram discuss the operating principles of the power supply unit (10marks)