



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR
FIRST YEAR SECOND SEMESTER EXAMINATIONS
FOR THE DIPLOMA
IN
INFORMATION TECHNOLOGY**

COURSE CODE: DIT 057

COURSE TITLE: COMPUTER SYSTEM MAINTENANCE

DATE: 11/04/2023

TIME: 2:00-3:30PM

INSTRUCTIONS TO CANDIDATES

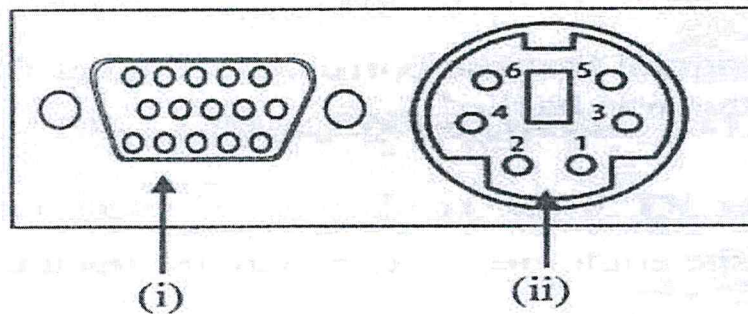
Attempt Question ONE (compulsory) and any other TWO questions

TIME: 1 HOUR 30 MINS

MMUST observes ZERO tolerance to examination cheating

Question ONE (24 marks)

- a. Explain **two** circumstances under which the main memory of a computer would be replaced **(4 marks)**
- b. Outline **five** factors that should be considered when selecting a troubleshooting technique. **(5 marks)**
- c. Outline **four** functions of power supply unit **(4 marks)**
- d. List **four** types of application software used in computers. **(4 marks)**
- e. The figure below shows ports used to connect devices in a computer. Identify the ports labelled (i) and (ii) and state which I/O device each of them connects. **(4 marks)**



- f. Sophy noted that some of her documents in her computer were encrypted and she was forced to pay a certain fee through Internet to decrypt her files.
 - i. Identify this type of attack. **(1 marks)**
 - ii. Outline **two** possible causes for the attack identified in (i). **(2 marks)**

Question TWO (18 Marks)

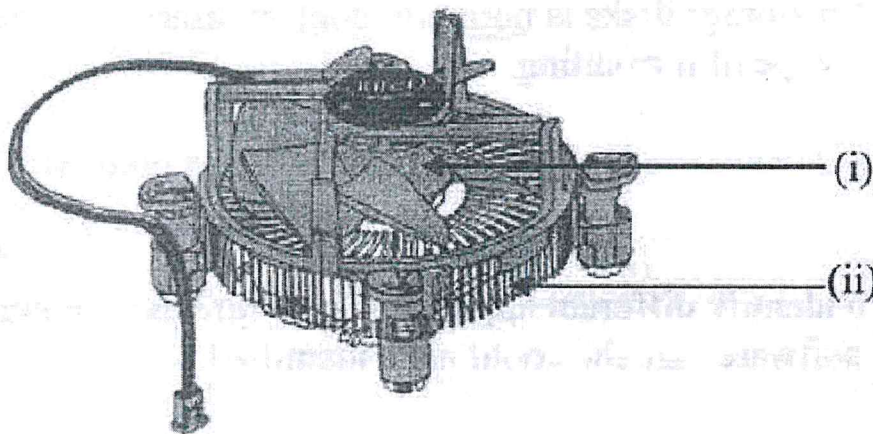
- a. Laban noted an email that appeared as if it was sent by his bank requesting him to confirm his account details.
 - i. Identify the type of attack depicted in the email **(1 mark)**
 - ii. Outline four security measures that he could use to mitigate the type of attack identified in (i) **(4 marks)**
- b. Explain **three** circumstances under which an organization could consider disposing off their computers. **(6 marks)**
- c. Outline **three** safety measures that could be used to protect data stored in computers **(3 marks)**
- d. A lecturer instructed students to store their documents in the cloud backup mechanisms and not in a flash memory. Explain two reasons that could justify the instruction to students **(4 marks)**

Question THREE (18 Marks)

- a. Hardware conflicts can cause serious problems to computer system.
 - i. State the causes of hardware conflicts **(2 marks)**
 - ii. Discuss how you would be able to detect a hardware conflict in windows OS **(5 marks)**
- b. Discuss the principal duties of the BIOS During POST in boot up process of a computer **(5 marks)**
- c. Explain what is meant by a Disaster Recovery Plan. Give reasons why it is important. **(4marks)**
- d. Distinguish between firewall program and antivirus program. **(2 marks)**

Question FOUR (18 Marks)

- a. Ivyn was required to replace a faulty RAM chip in a computer. Outline four precautions that she could observe in order to accomplish the task. **(4 marks)**
- b. Computer technicians experience several challenges when carrying out routine maintenance. Outline three challenges they could experience. **(3 marks)**
- c. The figure below shows a component of computer motherboard. Identify the parts labelled (i) and (ii) stating their functions **(4 marks)**.



- d. Explain the function of each of the following keys during Power On Self Test (POST) process in a computer system.
 - i. Esc **(3 marks)**
 - ii. F10 **(4 marks)**

Question FIVE (18 Marks)

- a. Describe two advantages of the invention of the USB port. **(4 marks)**
- b. State four importance of data backup **(4 marks)**
- c. Explain what is meant by CMOS chip. Explain why it is important and what happens when the CMOS battery low. **(4 marks)**
- d. State the functions of device drivers **(2 marks)**
- e. Differentiate between safe mode and normal start-up modes as used in computers **(4 marks)**