*(University of Choice)*

# MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

## UNIVERSITY EXAMINATIONS

## 2021/2022 ACADEMIC YEAR

SPECIAL EXAM

## FIRST YEAR FIRST SEMESTER EXAMINATIONS

## FOR THE DIPLOMA

## IN

## INFORMATION TECHNOLOGY,

## BUSINESS INFORMATION TECHNOLOGY

**COURSE CODE:** DIT 057

**COURSE TITLE:** COMPUTER SYSTEM MAINTENANCE

**DATE:** 02/08/2022          **TIME:** 2PM – 4PM

## INSTRUCTIONS TO CANDIDATES

Attempt Question ONE (compulsory) and any other TWO questions

TIME: 1HR 30 MINS

MMUST observes ZERO tolerance to examination cheating

**Question One (24 marks)**

a. Explain any six predisposing computer behaviors suggesting that your computer may be infected by a malicious software **(6 marks)**

b. Describe two disadvantages of the invention of the VGA port. **(4 marks)**

c. State four functions of **CMOS** battery **(4 marks)**

d. State four reasons for performing computer maintenance **(4 marks)**

e. After cleaning your motherboard with a dust remover machine like the blower, you will need to clean it further by applying a certain liquid to prevent short circuiting. Explain the composition of this liquid. Give reasons why it is used instead of water. **(4 marks)**

f. List the two major components of a computer system **(2 marks)**

**Question Two (18 marks)**

a. You have been given a computer which has a motherboard password. The owner forgot the password and has requested you to reset it. You discover that the only way to reset is to check the motherboard.
   i.  Describe the two ways you can physically use to reset the password **(6 Marks)**
   ii. State the condition under which the above hard reset mechanisms can work. **(2 Marks)**

b. You later decide to format the computer and reinstall a new windows 7 OS. You have been given a flash disk 8GB, and a bootable ISO image windows7.
   i.  Describe how you would copy the OS on flash drive to make it bootable **(4 marks)**
   ii. Describe the steps you would follow to reinstall the operating system from the media above starting from the BIOS configuration **(6 Marks)**

**Question Three (18 marks)**

a. You are a lab technician of your organization. The organization has procured new computers to be set up in your lab. Describe the procedures involved in setting up the computers. **(6 Marks)**

b. You have recently installed a new software in the computers, one computer suddenly develops boot problems and keeps on rebooting and cannot allow you to log on as a user. Explain how you can solve the problem incurred **(4 marks)**

c. Discuss any three Computer Troubleshooting and Repair practices that you would use to maintain the computers **(6 Marks)**

d. Outline any four factors considered when selecting a computer hardware **(2 Marks)**

## Question Four (18 marks)

g. Explain any six predisposing computer behaviors suggesting that your computer may be infected by a malicious software **(6 marks)**

h. Describe two disadvantages of the invention of the VGA port. **(4 marks)**

i. State four functions of **CMOS** battery **(4 marks)**

j. State four reasons for performing computer maintenance **(4 marks)**

k. After cleaning your motherboard with a dust remover machine like the blower, you will need to clean it further by applying a certain liquid to prevent short circuiting. Explain the composition of this liquid. Give reasons why it is used instead of water. **(4 marks)**

l. List the two major components of a computer system **(2 marks)**

## Question five (18 marks)

a. State the function of a surge protector used in computer labs **(2 marks)**

b. Explain functions of device drivers **(3 Marks)**

c. After cleaning your motherboard with a dust remover machine like the blower, you will need to clean it further by applying a certain liquid to prevent short circuiting. Explain the composition of this liquid. Give reasons why it is used instead of water. **(3 marks)**

d. Differentiate between online backup and cloud backup **(4 Marks)**

e. Company X has set up different backup mechanisms to their data. The following in the job to be done. Their initial data by last Monday was 50GB. On Tuesday some changes were made to the existing data and new files added to the existing data totaling to 65GB. On Wednesday, no changes were made to the database. On Thursday, new changes were made to the existing data and new files added, totaling to 70GB and on Friday, the changes that were made had equal storage space as that of Thursday. Assuming backup was done every day from Monday to Friday, calculate amount of storage space used by Friday for the following backup types:

     i. Incremental **(3 Marks)**

     ii. Differential **(3 Marks)**