# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

## UNIVERSITY EXAMINATIONS 2023/2024

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS INFORMATION TECHNOLOGY, BACHELOR OF INFORMATION TECHNOLOGY, BACHELOR OF EDUCATION SCIENCE AND BACHELOR OF EDUCATION ARTS

### CIT 3255: PC MAINTENANCE AND NETWORKING

**DATE: APRIL 2024**                                                    **TIME: 2 HOURS**

**INSTRUCTIONS: Answer Question ONE and any other TWO questions.**

**QUESTION ONE (30 MARKS)**

a)  Define the following terms:

    i.   Computer Network                                                    (1 Mark)

    ii.   Topology                                                               (1 Mark)

    iii.   Network Operating systems                                  (1 Mark)

b)  What is partitioning? Discuss three importance of disk partitioning        (3 Marks)

c)  Outline the procedure of installing a motherboard                          (6 Marks)

d)  State any four reasons as to why computer maintenance is important          (2 Marks)

e)  List down 12 components of a motherboard and their functions               (6 Marks)

f)  Discuss the procedure you would follow when assembling a desktop PC        (5 Marks)

g)  Define system restore and explain four scenarios when it is necessary      (5 Marks)

**QUESTION TWO (20 MARKS)**

a) Discuss three preventive measures meant to maintain computer hardware.     (6 Marks)

b) Define the following terms:

    i.    System software    (2 Marks)

    ii.    Utility software    (2 Marks)

    iii.    Application software    (2 Marks)

c) Define the term Malware. How can we overcome computer Malware?    (2 Marks)

d) State three advantages of the NTFS file system over the FAT or FAT32 systems (6 Marks)

**QUESTION THREE (20 MARKS)**

a) What is the main role of a secondary storage devices    (3 Marks)

b) Explain the two main differences between ROM and RAM    (4 Marks)

c) State three purposes of system documentation

d) How can you resolve the following windows and hardware problems:    (3 Marks)

    i.    Computer failing to boot but producing continuous sound with no display  (5 Marks)

    ii.    Computers boot file corrupted by boot sector virus    (5 Marks)

**QUESTION FOUR (20 MARKS)**

a) i. Discuss five ways of fixing computer hardware problems    (5 Marks)

b) Preventative maintenance reduces the probability of hardware or software problems by systematically and periodically checking hardware and software to ensure proper operation Discuss any three software and three hardware regular maintenance procedures (6 Marks)

c) Explain any three importance of preventive maintenance    (6 Marks)

d) Define USB    (1 Mark)

e) Define the term computer trouble shooting    (2 Marks)

**QUESTION FIVE (20 MARKS)**

a) Define a repeater (2 Marks)

b) What is the difference between an active hub and a passive hub (2 Marks)

c) Define the following terms as used in computer networks:

   i.     Local Area Network (2 Marks)

  ii.     Wide Area Network (2 Marks)

 iii.    Metropolitan Area Network (2 Marks)

 iv.    Personal Area Network (2 Marks)

d) What is a router? Give one of its advantages over a bridge (3 Marks)

e) Give any three types of network topologies with an example for each (5 Marks)