MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

FOR THE DIPLOMA

IN

INFORMATION TECHNOLOGY

COURSE CODE: DIT 069

COURSE TITLE: DATA COMMUNICATION

DATE: 12/04/2023   **TIME:** 8:00-9:30AM

INSTRUCTIONS TO CANDIDATES

Answer **Questions ONE** and **ANY OTHER TWO.**

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

QUESTION ONE (24MKS)

a) Define the following terms   [4 mks]

     i.   Computer Networks

     ii.   Data Communication

b) List down four factors that affect the performance of a network   [4 mks]

c) Give ONE advantage for each type of network topology.   [6 MKS]

d)

     i.   Define topology   [2 mks]

     ii.   Explain any four the types of topologies   [8 mks]

QUESTION TWO (18MKS)

a) Explain three OSI layers which are the user support layers   [6 mks]

b) Write short notes on WAN   [3 mks]

c) Describe the following three types of transmission media   [9 mks]

     i.   Twisted – pair cable.

     ii.   Coaxial cable.

     iii.   Fiber – optic cable.

QUESTION THREE (20MKS)

a) List and explain the responsibilities of the seven layers of OSI model.   [14 mks]

b) Write short notes on

     i.   LAN   [2 mks]

     ii.   MAN   [2 mks]

QUESTION FOUR (18MKS)

a) Explain any three types of topologies   [6 mks]

b) List and explain the responsibilities of the seven layers of OSI model.   [12mks]

QUESTION FIVE (18MKS)

a) Differentiate between the terms data and information.   [2 mks]

b) Explain four components of data communication   [8 mks]

c) With an aid of a diagram explain mesh and star topologies   [8 mks]