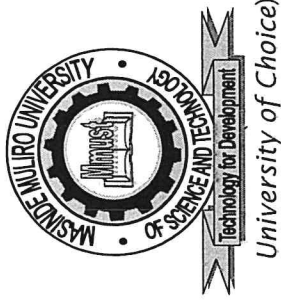


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**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS**

**FOR THE DIPLOMA**

**IN**

**INFORMATION TECHNOLOGY**

**COURSE CODE: DIT 060**

**COURSE TITLE: DATA COMMUNICATION AND NETWORKS I**

**DATE: Tuesday 19/04/2022**

**TIME: 8:00a.m-9:30am**

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**INSTRUCTIONS TO CANDIDATES**

Answer Questions ONE and ANY OTHER TWO.

**TIME: 1 Hour 30 Minutes**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

### Section A Answer all questions from this section

#### Question one (24 Marks)

- a) State prerequisites necessary for effective communication of devices in a network (4 marks)
- b) Explain the TWO modes of media transmission/communication (4 marks)
- c) Briefly explain advantages of  
  - (i) 2.4 Ghz wireless transmission (6 marks)
  - (ii) 5.0 Ghz wireless transmission (4 marks)
  - (iii) Cable media to Wireless (3Marks)
- d) Explain FOUR parts of IP address (3Marks)
- e) State any Three network devices and their functions
- f) Explain any THREE cloud hosting services (3Marks)

### Section B Answer any two questions from this section

#### Question Two (18 Marks)

- a) Explain the downsides of Internet (8 Mks)
- b) Explain disadvantages of ring topology (5Mks)
- c) Describe any THREE disadvantages of VSAT transmission (3mks)
- d) Explain FTP (2mks)

#### Question Three (18 Marks)

- a) Describe FIVE classes of IP addresses indicating their range and give an example in each Class of IP in four parts (10 marks)
- b) Explain parts of this email...ruth@student.mmust.ac.ke (4Mks)
- c) Describe any passive network equipment used in structured networking (4 Mks)

#### Question Four (18 Marks)

- a) Using Binary explain how come up with subnet mask class A/8 ,B/16 and C/24 (9 marks)
- b) Taking consideration of MMUST scenario explain how a student is able to browse On Twitter on MMUST network indicating devices in which data will pass through In their order (6 Marks)
- c) Describe any THREE advantages of satellite link (3Mks)

#### Question Five

- a) State and explain any FIVE uses of Internet (10Mks)
- b) State advantages of storing files in the cloud (8Mks)