



THE TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
CERTIFICATE IN INFORMATION COMMUNICATION TECHNOLOGY
(CSIT)

EIT 1112: DATA COMMUNICATION

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

- a) Define data communication. (2 marks)
- b) State **FIVE** benefits of networks. (5 marks)
- c) Define the following terminologies:
- (i) Band width
 - (ii) Through put
 - (iii) DTE
 - (iv) DCE
 - (v) Transducer (5 marks)
- d) With the use of unshielded twisted pair copper wire in a network what causes crosstalk within the cable pairs? (3 marks)
- e) What are the reasons or importance of layering the stack in the OSI 7 layer reference model? (5 marks)

Question Two

- a) Define the following:
- (i) Peer-to-peer network
 - (ii) Server-based network
 - (iii) White noise
 - (iv) Attenuation (8 marks)
- b) What are the comparison between Analogue and Digital transmission? (6 marks)
- c) Name and explain the **THREE** fundamental modulation techniques. (6 marks)

Question Three

- a) State and explain the **THREE** fundamental physical topologies of a computer network. (6 marks)
- b) With aid of a diagram, explain the features found in a Token Frame format. (10 marks)
- c) Name **FOUR** threats to computer software and equipment. (4 marks)

Question Four

- a) What are the roles of communication protocols? (5 marks)
- b) Define the following with examples:
- (i) Simplex
 - (ii) Half duplex
 - (iii) Full duplex (9 marks)
- c) State and explain the 2 types of transmission modes. (6 marks)

Question Five

- a) In guided media, state and explain the **THREE** types in this category. **(9 marks)**
- b) What is multiplexing with the aid of a diagram? **(3 marks)**
- c) Name the **FIVE** application areas of multiplexing. **(5 marks)**
- d) What limitations of the token ring network gave rise to the introduction of FDDI? **(3 marks)**