



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION

TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

EIT 2201: DATA COMMUNICATION

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2019

TIME: 2 HOURS

DATE: Pick Date Aug 2019

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

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

Do not write on the question paper.

Question ONE

- (a) Define packet switching. (1 Marks)
- (b) Distinguish between ATM and Frame Relay packed switched protocol suites. (6 Marks)
- (c) Explain Frequency Division Multiplexing. (3 Marks)
- (d) Encode the following bit stream 1100110111010 using
 - (i) Manchester
 - (ii) Differential Manchester
 - (iii) Pseudoternary
 - (iv) NRZ-I (8 Marks)

Question TWO

- (a) Distinguish between half duplex and full duplex (4 Marks)
- (b) Differentiate between ALOHA and Pure ALOHA Medium Access Methods (4 Marks)
- (c) Compare and Contrast Packet Switching to Circuit Switching (12 Marks)

Question THREE

- (a) Compare and contrast Synchronous Transmission to Asynchronous Transmission (6 Marks)
- (b) Discuss the SEVEN layers of the OSI Reference Model (14 Marks)

Question FOUR

- (a) Explain any FOUR possible wireless propagation that are used radiate signals from antenna (4 Marks)
- (b) Explain THREE main types of signal impairment (6 Marks)
- (c) Explain any FIVE Optical Fiber connector losses with the aid of a sketch (10 Marks)

Question FIVE

- (a) Explain any FOUR causes of errors in Data Communication (4 Marks)
- (b) Discuss Multiple Access Protocol/Methods (8 Marks)
- (c) Discuss Modulation in Data Communication (8 Marks)