



# TECHNICAL UNIVERSITY OF MOMBASA

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## INSTITUTE OF COMPUTING AND INFORMATICS

### DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

#### UNIVERSITY EXAMINATION FOR:

#### DIPLOMA INFORMATION COMMUNICATION TECHNOLOGY

#### EIT 2208: FUNDAMENTALS OF COMPUTER SECURITY

#### SPECIAL/ SUPPLEMENTARY EXAMINATION

**SERIES: SEPTEMBER 2018**

**TIME: 2HOURS**

**DATE: Sep 2018**

#### 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.**

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#### Question ONE

- a) Differentiate between open door and closed door approach to computer security (4 marks)
- b) State one advantage and one disadvantage to each of the two approaches (4 marks)
- c) Explain the roles of a network administrator (4 marks)
- d) List and explain the key features of a user account (8 marks)

#### Question TWO

- a) Explain the types of attack in electronic commerce security (10 marks)
- b) Explain how these threats can be mitigated (10 marks)

### Question THREE

- a) Explain the term firewall as used in computer security (2 marks)
- b) Using a pin diagram differentiate between a straight through and a cross over cable. (4 marks)
- c) Give one case where each of the cables above is applicable. (4 marks)
- d) Explain the following terms as used in information security.
  - i. confidentiality
  - ii. integrity
  - iii. availability
  - iv. authentication
  - v. access control (10 marks)

### Question FOUR

- a) Define the term intrusion detection system as used in computer security. (4 Marks)
- b) Explain any SIX different types of intrusion detection system as used in computer security. (12 Marks)
- c) Explain how an intrusion prevention system works (4 marks)

### Question FIVE

Explain the following techniques used by malicious attackers on a computer based system.

- i. E-mail Hacking (4 marks)
- ii. Social Engineering (4 marks)
- iii. Intrusion Attacks (4 marks)
- iv. DOS Attacks (4 marks)
- v. E-mail Bombing (4 marks)