TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

CERTIFICATE IN INFORMATION TECHNOLOGY (CIT 14S)

EIT 1131: FUNDAMENTALS OF INFORMATION SECURITY

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*
This paper consists of **FIVE** questions.
Attempt question **ONE (Compulsory)** and any other **TWO** questions
Maximum marks for each part of a question are as shown

Question One (Compulsory)

a) Outline the process of authentication of user when accessing secured information system.

(6 marks)

b) Explain:
  (i) Confidential data
  (ii) Prohibited data
  (iii) Restricted data
     Give examples of each **(6 marks)**

c) List any FIVE ways that can be used to identify a user of secured information system. **(5 marks)**

d) Differentiate between log and audit trail **(3 marks)**

Question Two

a) State any FIVE ways in which information can be lost **(5 marks)**

b) Define software virus **(2 marks)**

c) Discuss how you would prevent spread of virus in a busy organization **(8 marks)**

d) Assume you are responsible for computerized information system in an organization. Draw up guide line to keep password secured. **(5 marks)**

Question Three

a) Discuss the following concepts with reference to information security:
  (i) Confidentiality of data
  (ii) Integrity of data
  (iii)   Availability of data
  (iv) Accountability **(16 marks)**

b) Explain what is meant by encryption of data. Briefly explain how encryption works **(4 marks)**

Question Four

a) Describe any THREE software methods to protect privacy of information **(4 marks)**

b) Explain any TWO types of encryption system **(4 marks)**

c) Discuss the precautions one should take when using internet services to protect information and identify theft **(6 marks)**

d) Explain the following as applied to information security **(6 marks)**
  (i) Vulnerabilities
  (ii) Threats
  (iii)   Risks

Question Five

a) Briefly discuss the process of risk analysis **(10 marks)**

b) List the precautionary methods you can employ in an organization to prevent disasters taking place. **(5 marks)**

c) Assume you are in charge of computer lab. List any FIVE rules you would enforce to protect you computer system. **(5 marks)**