061006T4ICT

ICT Technician Level 6

IT/OS/ICT/CR/03/6/A

Control ICT Security Threats

Nov. /Dec. 2022

THE KENYA NATIONAL EXAMINATIONS COUNCIL

WRITTEN ASSESSMENT

Time: 3 hours

INSTRUCTIONS TO CANDIDATE

Maximum marks for each question are indicated in brackets ( ).

*This paper consists of **TWO** sections: A and B.*

Answer questions as per instructions in each section.

You are provided with a separate answer booklet.

*This paper consists of **THREE (3)** printed pages*
Candidates should check the question paper to ascertain that all pages are printed as

Indicated and that no questions are missing

SECTION A (40 MARKS)

(Answer all the questions in this section)

1. Define the term computer security (2 Marks)

2. Explain each of the following terms as used in computer security (10 Marks)

    i) Firewall

    ii) Hacking

    iii) Threat

    iv) Vulnerability

    v) Risk

3. Outline any **FOUR** important functions that information security performs for an organization (4 Marks)

4. Differentiate between *Vulnerability Assessment* and *Penetration Testing* (4 Marks)

5. Outline any **TWO** reasons why it is important to use a VPN when accessing internet using a public network. (2 Marks)

6. State any **THREE** ways attackers may use to identify an individual password. (3 Marks)

7. List any **THREE** ways data from within the organization may be exposed or accessed by unauthorized entity (3 Marks)

8. Explain any **THREE** classifications of computer hackers (6 Marks)

9. List any **THREE** physical threats to a computer system (3 Marks)

10. State any **THREE** ways that you can use to prevent Brute Force attacks. (3 Marks)

SECTION B (60 marks)

(Answer any three questions in this section)

11. Discuss any **FIVE** cyber security risks in the banking industry and suggest how each can be prevented. (20 Marks)

12. a) Define identity Theft as used in computer security (3 Marks)

    b) Outline any **SEVEN** ways one can use to prevent identity theft. (7 Marks)

    c) Discuss the following types of malicious ware. (10 Marks)

    i) Viruses

    ii) Trojans

    iii) Worms

    iv) Ransomware

    v) Spyware

13. Discuss any **TEN** measures you can advise an organization to apply to protect itself from cyber-attacks. (20 Marks)

14. a) Discuss elements of an Information Security Policy. (9 Marks)

    b) Explain **THREE** main objectives of Information security. (6 Marks)

    c) State any **FIVE** types of computer Security Testing. (5 Marks)