061206T4CYB

CYBER SECURITY TECHNICIAN LEVEL 6

SEC/OS/CS/CR/04/6/A

BUILD SECURE NETWORK

Nov. / Dec. 2023

TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

WRITTEN ASSESSMENT

Time: 3 Hours

INSTRUCTIONS TO CANDIDATES

1. This paper has two sections **A** and **B.**
2. You are provided with a separate answer booklet.
3. Marks for each question are as indicated.
4. Do not write on the question paper.

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 from this section

1. Differentiate between the following devices, **switch** and a **router** as used in networking.

   (4 marks)

2. Explain any TWO types of topologies as used in networking   **(4 marks)**

3. State FOUR network security threats   **(4 marks)**

4. Highlight THREE main types of network security protocols.   **(3 marks)**

5. List FOUR strategies deployed to implement perimeter security.   **(4 marks)**

6. State FIVE types of wireless media connections.   **(5 marks)**

7. Identify FOUR types of networks classified according to geographical location.   **(4 marks)**

8. Highlight FOUR benefits of preparing networking reports.   **(4 marks)**

9. Identify FIVE measures that can be taken to improve network speed.   **(5 marks)**

10. List THREE types of networks security test.   **(3 marks)**

SECTION B (60 MARKS)

Answer THREE questions from this section.

11. As a network security engineer:

    a) Describe FIVE factors to consider in analyzing network security protocol. **(10 marks)**

    b) Describe FIVE benefits of analyzing network security protocol. **(10 marks)**

12. A Financial system company in Nairobi has contracted you to implement the Perimeter security solution in their network.

    a) Describe FIVE challenges you are likely to face when installing and configuring a perimeter solution. **(10 marks)**

    b) Describe FIVE techniques you are likely to deploy to provide the perimeter network with self-defensive mechanisms against potential threats and attacks. **(10 marks)**

13. Successful installation of a perimeter solution requires configuration of internal networks as well as external networks.

    a) Describe FIVE key features of both internal and external networks. **(10 marks)**

    b) Describe FIVE factors to consider in configuration of internal network devices. **(10 marks)**

14. The Ministry of Defense has just completed implementing the Perimeter security solution. They have recruited you as the Network security engineer.

    a) Describe FIVE key processes of performing network security tests to verify design performance. **(10 marks)**

    b) Outline FIVE factors to consider when performing network security tests. **(10 marks)**

END