

061206T4CYB

CYBER SECURITY TECHNICIAN LEVEL 6

SEC/OS/CS/CR/08/6/A

INSTALL CYBER SECURITY SYSTEM

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 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 questions in this section.

1. Define the term patch as used in cyber security systems. **(2marks)**
2. Explain THREE main pillars of information security triad. **(6 marks)**
3. State THREE main types of threats that need to be considered when designing software that is secure against cyberattacks. **(3 marks)**
4. The only way to be sure your network is secure is to actually check for vulnerabilities and flaws. List any FOUR tools that can help you in doing so. **(4 marks)**
5. Define the term Information Technology policy. **(2 marks)**
6. Explain THREE main technologies utilized for securing information system. **(6 marks)**
7. Differentiate between debugging and testing as applied in cyber security. **(2 marks)**
8. Define the following terms.
 - a) Ethical hacking **(2 marks)**
 - b) Cyber-attack **(2 marks)**
9. Discuss TWO types of testing on a cyber security system. **(4 marks)**
10. Explain TWO benefits of Cyber security monitoring. **(4 marks)**
11. Outline THREE factors to consider during procurement of a cyber security management system. **(3 marks)**

SECTION B: (60 Marks)

Answer any THREE questions in this section.

- 12. a)** John is a cyber-analyst in XYZ Company. He plans to organize a training camp to train the users on how to use and manage the installed cyber security management system in the company. Explain FIVE training methods he would use to train the users. **(10 marks)**
- b)** Define cyber security and Describe the procedure of performing a cyber security assessment test. **(10 marks)**
- 13. a)** Define Audit logging. **(2 marks)**
- b)** Explain FIVE benefits of patch management as applied in cyber security. **(10 marks)**
- c)** Discuss FOUR reasons why backups are important in cyber security. **(8 marks)**
- 14. a)** Differentiate between authentication and authorization in relation to computer security **(4marks)**
- b)** Explain what is meant by the term firewall in network security and discuss THREE ways of how it is used in network architectures. **(8 marks)**
- c)** Confidentiality, Integrity and Availability are core attributes in cybersecurity. Identify THREE threats to a wireless network that could compromise security stating the attribute that is compromised by each threat. **(8 marks)**
- 15. a)** Briefly describe the term vulnerability in the context of cybersecurity and provide THREE examples of vulnerabilities in a network. **(5 marks)**
- b)** Describe FIVE types of attacks that an ideal password authentication scheme has to withstand. **(10 marks)**
- c)** State FIVE qualities of a good cyber security report. **(5 marks)**

END