

061205T4CYB

CYBER SECURITY LEVEL 5

SEC/OS/CS/CR/04/5

Secure Software Application

March/April 2026



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

WRITTEN ASSESSMENT

Time: 2 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.
2. Attempt **ALL** questions in section **A** and **ANY THREE** Questions in section **B**
3. Marks for each question are indicated in the brackets.
4. Candidates are provided with a separate answer booklet
5. 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 Questions in this Section

1. Using software from unverified or unknown sources can be risky. State TWO security risks that may occur when using software from untrusted sources. (2 Marks)
2. Before installing any application, organizations are advised to verify system requirements. Identify THREE reasons why verifying system requirements is important. (3 Marks)
3. Organizations rely on different types of application software for daily operations. State FOUR types of application software. (4 Marks)
4. Software security reports contain important information for the organization. Identify FOUR ways these reports can be shared safely with the right people. (4 marks)
5. Software applications face multiple security risks. List FOUR common security threats that can affect software (4 Marks)
6. When choosing application software for an organization, security is an important factor. State FOUR security considerations that should be checked before selecting application software. (4 Marks)
7. Regular software updates are essential for ensuring system reliability. Describe FOUR benefits of updating software applications. (4 marks)
8. Poor password management can compromise software security. Outline FOUR best practices for secure password management (4 Marks)
9. Software security testing helps to protect applications. Differentiate between vulnerability scanning and penetration testing. (4 Marks)
10. Software licenses define how software is used. Identify FOUR types of software licenses. (4 Marks)
11. User authentication is an important part of keeping software applications secure. Explain THREE methods of authentication that organizations can use to protect their software. (3 Marks)

SECTION B (60 MARKS)

Answer ANY THREE Questions in This Section.

12. XYZ Bank recently noticed that some employees clicked on phishing links, compromising access to their internal banking software. The IT team wants to improve software security awareness among staff.
- a) Describe FIVE benefits of conducting regular security awareness training for software users. (10 Marks)
 - b) The bank wants to secure its online banking application. Explain FIVE advantages of using multi-factor authentication (MFA) in software applications. (10 Marks)
13. A hospital, recently completed a security audit of its hospital management system. The audit found weak authentication and misconfigured access controls, which could expose sensitive client data
- a) Justify FIVE reasons why software security audit reports should be shared with the top management. (10 Marks)
 - b) Recommend FIVE measures that the hospital can implement to improve authentication and access control in the software application. (10 Marks)
14. Tech Solutions Ltd is about to release a new inventory management software. The IT team needs to make sure the application is secure and reliable before it is used by staff and clients.
- a) Explain FIVE reasons why secure application testing is necessary before deployment. (10 Marks)
 - b) Identify FIVE challenges Tech Solutions is likely to encounter during software testing. (10 Marks)
15. FGH Ltd develops a payment software. The IT team is reviewing how software patches and updates are applied to keep the system secure and running efficiently.
- a) Describe FIVE negative impacts of failing to apply software patches on time. (10 Marks)
 - b) Explain FIVE advantages of online software updates to manufacturers. (10 Marks)