Tisha MAZUMDAR

| Échelle d'évaluation standard : **B (% de réussite compris entre 50 et 75%)** | Échelle d'évaluation pondérée : **B (% de réussite compris entre 50 et 75%)** |
|---|---|

# EN - Système d'informations et sécurité - CCTL - I

Échelle d'évaluation standard : **B (% de réussite compris entre 50 et 75%)**

### ❓ Question 1 — Question à réponse unique

What is the main function of a router in an information system?

Réponses correctes

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | Filtering data packets |
| B | ☑ | ☑ | Non | Linking different networks |
| C | ☐ | ☐ | Non | Managing file access permissions |
| D | ☐ | ☐ | Non | Monitoring network traffic |
| E | ☐ | ☐ | Non | Hosting DNS servers |

### ❓ Question 2 — Question à réponse unique

What are the three main layers of an information system?

Réponses correctes

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Hardware layer, software layer, network layer |
| B | ☐ | ☐ | Non | Application layer, network layer, physical layer |
| C | ☐ | ☐ | Non | User layer, transport layer, data layer |
| D | ☐ | ☐ | Non | Hardware layer, software layer, management layer |
| E | ☐ | ☐ | Non | Security layer, logic layer, hardware layer |

### ❓ Question 3 — Question à réponse unique

In a corporate network, what is used to segment the network into distinct subnetworks?

Réponses correctes

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | A router |
| B | ☐ | ☐ | Non | A switch |
| C | ☐ | ☐ | Non | A firewall |
| D | ☑ | ☑ | Non | A VLAN |
| E | ☐ | ☐ | Non | A Wi-Fi antenna |

## Question 4 — Question à réponses multiples

What are the main characteristics of a VLAN in an information system?

| Réponses partiellement correctes | | | 1 discordance | |
|---|---|---|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | It creates virtual sub-networks within a single physical network |
| B | ☐ | ☐ | Non | It speeds up Internet connections |
| C | ☐ | ☑ | Oui (+1) | It secures access to shared resources |
| D | ☑ | ☑ | Non | It reduces traffic by isolating departments |
| E | ☐ | ☐ | Non | It automatically doubles the available bandwidth |

## Question 5 — Question à réponses multiples

What can a firewall do to secure a corporate network?

| Réponses partiellement correctes | | | 1 discordance | |
|---|---|---|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☑ | Oui (+1) | Block DDoS attacks |
| B | ☑ | ☑ | Non | Filter incoming and outgoing traffic |
| C | ☑ | ☑ | Non | Analyze data packets according to security rules |
| D | ☐ | ☐ | Non | Create VPN connections |
| E | ☐ | ☐ | Non | Replicate sensitive data in a secure cloud |

## Question 6 — Question à réponse unique

What technology is used to guarantee the confidentiality of remote communications in an information system?

| Réponses correctes | | | |
|---|---|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | VLAN |
| B | ☑ | ☑ | Non | VPN |
| C | ☐ | ☐ | Non | Firewall |
| D | ☐ | ☐ | Non | Cloud |
| E | ☐ | ☐ | Non | Protocol FTP |

## Question 7 — Question à réponse unique

What is the main function of Active Directory in an information system?

**Réponses correctes**

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | Save data |
| B | ☑ | ☑ | Non | Manage user access rights |
| C | ☐ | ☐ | Non | Control Internet access |
| D | ☐ | ☐ | Non | Securing VPN connections |
| E | ☐ | ☐ | Non | Optimize network bandwidth |

## Question 8 — Question à réponse unique

In a cloud computing context, what is the main difference between a public cloud and a private cloud?

**Réponses correctes**

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Private clouds are used exclusively by a single company |
| B | ☐ | ☐ | Non | Public clouds are less secure than private clouds |
| C | ☐ | ☐ | Non | The public cloud is more expensive |
| D | ☐ | ☐ | Non | Private clouds offer less flexibility than public clouds |
| E | ☐ | ☐ | Non | The public cloud does not allow data backup |

## Question 9 — Question à réponses multiples

How should an enterprise file server be protected?

**Réponses partiellement correctes**    1   discordance

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | By connecting it directly to the Internet |
| B | ☑ | ☑ | Non | By applying GPOs to limit access |
| C | ☐ | ☑ | Oui (+1) | By activating a VPN for remote access |
| D | ☑ | ☑ | Non | By placing it in a dedicated VLAN |
| E | ☐ | ☐ | Non | By configuring it in public network mode |

## ❓ Question 10 | Question à réponse unique

What is the main role of a cloud backup?

**Réponses correctes**

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | Improve data processing speed |
| B | ☑ | ☑ | Non | Guarantee rapid recovery in the event of a disaster |
| C | ☐ | ☐ | Non | Facilitate remote data access |
| D | ☐ | ☐ | Non | Reduce physical server costs |
| E | ☐ | ☐ | Non | Automatically delete old file versions |

## ❓ Question 11 | Question à réponses multiples

What measures are essential to protect sensitive company data?

**Réponses partiellement correctes** | **1 discordance**

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Use complex passwords |
| B | ☐ | ☑ | Oui (+1) | Install antivirus software |
| C | ☑ | ☑ | Non | Apply access control policies via GPO |
| D | ☑ | ☑ | Non | Set up VLANs to separate departments |
| E | ☐ | ☐ | Non | Disable Windows firewalls |

## ❓ Question 12 | Question à réponses multiples

How does network segmentation via VLAN contribute to the security of an information system?

**Réponses partiellement correctes** | **1 discordance**

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | It prevents unauthorized users from accessing other departments' resources |
| B | ☐ | ☐ | Non | It improves data processing speed |
| C | ☑ | ☑ | Non | It reduces internal threats by limiting unnecessary data movement |
| D | ☐ | ☑ | Oui (+1) | It enables secure communications between users |
| E | ☐ | ☐ | Non | It completely eliminates the risk of external intrusion |

## ❓ Question 13 — Question à réponses multiples

What tools are needed to administer a Linux server in a network environment?

| Réponses incorrectes | 4 discordances |
|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☐ | Oui (+1) | SSH |
| B | ☐ | ☑ | Oui (+1) | GPO |
| C | ☐ | ☑ | Oui (+1) | DNS |
| D | ☑ | ☐ | Oui (+1) | IPTables |
| E | ☐ | ☐ | Non | Gnome |

## ❓ Question 14 — Question à réponses multiples

What is the main function of GPOs in a network infrastructure?

| Réponses partiellement correctes | 1 discordance |
|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☑ | Oui (+1) | Automatic software updates |
| B | ☑ | ☑ | Non | Defining access permissions to network resources |
| C | ☐ | ☐ | Non | Managing Internet connections |
| D | ☑ | ☑ | Non | Applying security policies to workstations |

## ❓ Question 15 — Question à réponses multiples

Which of these defenses can enhance network security against cyber attacks?

| Réponses partiellement correctes | 1 discordance |
|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | IDS |
| B | ☑ | ☑ | Non | Antivirus |
| C | ☐ | ☑ | Oui (+1) | VLAN |
| D | ☑ | ☑ | Non | Firewall |
| E | ☐ | ☐ | Non | Use of default passwords |

What is a "phishing" attack?

**Réponses correctes**

|   | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | An attack that overloads a server with requests |
| B | ☐ | ☐ | Non | An attack to spy on network communications |
| C | ☑ | ☑ | Non | An attack aimed at stealing sensitive information via fake emails |
| D | ☐ | ☐ | Non | An attack exploiting a security flaw in software |
| E | ☐ | ☐ | Non | An attack that blocks the network |

❓ **Question 17**                                    **Question à réponses multiples**

What security measures are recommended for remote IS access by employees?

| Réponses partiellement correctes | | 2  discordances | |
|---|---|---|---|

|   | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☑ | Oui (+1) | Use VLANs |
| B | ☑ | ☑ | Non | Set up a VPN |
| C | ☐ | ☑ | Oui (+1) | Install an antivirus |
| D | ☑ | ☑ | Non | Configure two-factor authentication (2FA) |
| E | ☐ | ☐ | Non | Disable internal firewalls |

❓ **Question 18**                                    **Question à réponses multiples**

What procedures need to be put in place to limit the risks associated with installing unauthorized software on workstations?

| Réponses partiellement correctes | | 1  discordance | |
|---|---|---|---|

|   | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Apply GPOs to prevent installation of unapproved software |
| B | ☐ | ☐ | Non | Set up a single sign-on (SSO) system |
| C | ☐ | ☑ | Oui (+1) | Disable UAC |
| D | ☐ | ☐ | Non | Activate VLANs to isolate users |
| E | ☑ | ☑ | Non | Limit administrator privileges to users |

## Question 19 — Question à réponse unique

Why is it important to keep IS software up to date?

**Réponses correctes**

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☐ | ☐ | Non | To automatically delete obsolete data |
| B | ☐ | ☐ | Non | To ensure compatibility with new equipment |
| C | ☐ | ☐ | Non | To prevent users from circumventing security rules |
| D | ☐ | ☐ | Non | To improve server performance |
| E | ☑ | ☑ | Non | To avoid security loopholes exploited by cyber attackers |

## Question 20 — Question à réponses multiples

What are the most common vulnerabilities in a computer network?

**Réponses correctes** — 0 discordance

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Use of weak passwords |
| B | ☑ | ☑ | Non | No network segmentation |
| C | ☑ | ☑ | Non | Incorrect firewall configuration |
| D | ☐ | ☐ | Non | Regular backups in the cloud |
| E | ☐ | ☐ | Non | Wi-Fi networks disabled |

## Question 21 — Question à réponses multiples

What measures can be put in place to prevent internal IS attacks?

**Réponses partiellement correctes** — 1 discordance

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Segmenting networks with VLANs |
| B | ☑ | ☑ | Non | Limiting access rights via GPO |
| C | ☐ | ☑ | Oui (+1) | Enabling a VPN for teleworking employees |
| D | ☑ | ☑ | Non | Setting up regular safety audits |
| E | ☐ | ☐ | Non | Default administrator access for all users |

## Question 22 — Question à réponse unique

Which security concept is essential for managing access rights to systems and files in a company?

**Réponses incorrectes**

|   | Réponse attendue | Réponse saisie | Réponse discordante |   |
|---|---|---|---|---|
| A | ☑ | ☐ | Oui (+1) | Least Privilege |
| B | ☐ | ☐ | Non | Full Access |
| C | ☐ | ☑ | Oui (+1) | Zero Trust |
| D | ☐ | ☐ | Non | Multi-Factor Authentication |
| E | ☐ | ☐ | Non | Universal Trust |

## Question 23 — Question à réponses multiples

What are the steps involved in setting up a secure server in a cloud environment?

**Réponses partiellement correctes** — 1 discordance

|   | Réponse attendue | Réponse saisie | Réponse discordante |   |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Configure a firewall for the server |
| B | ☑ | ☑ | Non | Apply regular security updates |
| C | ☐ | ☑ | Oui (+1) | Activate a VPN for remote management |
| D | ☑ | ☑ | Non | Back up data regularly |
| E | ☐ | ☐ | Non | Disable communication encryption |

## Question 24 — Question à réponses multiples

How can a network administrator ensure the confidentiality of data transmitted between two remote sites?

**Réponses partiellement correctes** — 2 discordances

|   | Réponse attendue | Réponse saisie | Réponse discordante |   |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | By using a VPN |
| B | ☑ | ☑ | Non | By encrypting data in transit |
| C | ☐ | ☑ | Oui (+1) | By segmenting the network with VLANs |
| D | ☐ | ☑ | Oui (+1) | By configuring complex passwords for users |
| E | ☐ | ☐ | Non | By using open network shares |

What's the best way to guarantee data security in the cloud?

| Réponses correctes | | | 0   discordance |
|---|---|---|---|

| | Réponse attendue | Réponse saisie | Réponse discordante | |
|---|---|---|---|---|
| A | ☑ | ☑ | Non | Using data encryption services |
| B | ☐ | ☐ | Non | Hosting critical applications in the public cloud |
| C | ☑ | ☑ | Non | Setting up rigorous access permissions |
| D | ☐ | ☐ | Non | Saving data on local servers only |
| E | ☐ | ☐ | Non | Sharing access keys with all users |