



**L-Università
ta' Malta**

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2026 MAIN SESSION**

SUBJECT:	Information Technology
PAPER NUMBER:	Controlled – Unit 3
DATE:	20 th April 2026
DURATION:	10:00 a.m. to 11:35 a.m.

**THIS PAPER SHOULD BE RETURNED TO THE INVIGILATOR
AFTER THE EXAMINATION.**

Name of candidate _____

I.D. number _____

School _____

Class _____

Answer **ALL** questions in the space provided.

Scenario

- Fortress Bank is a local bank.
- The bank owns six branches across the Maltese islands, including one in Valletta.
- Jamie is a junior network technician who has just joined the bank's network team.

Question 1

K-1 (4 marks)

a. Define the term 'network'.

(1)

b. State **TWO** purposes of a network, apart from sharing of hardware.

Purpose 1: _____

_____ (0.5)

Purpose 2: _____

_____ (0.5)

c. Outline **ONE** use of networks in banks and **ONE** use of networks at home.

Use of networks in banks: _____

_____ (1)

Use of networks at home: _____

_____ (1)

Question 2**K-2 (4 marks)**

a. Name **TWO** different types of networks, apart from HAN and WAN.

Network 1: _____ (0.5)

Network 2: _____ (0.5)

b. Outline HAN and WAN based on geographical area.

Outline of HAN (Home Area Network): _____

_____ (0.5)

Outline of WAN (Wide Area Network): _____

_____ (0.5)

c. Jamie hears his colleagues mentioning two different types of network architectures: client-server and peer-to-peer.

Differentiate between client-server and peer-to-peer network architectures with respect to network management and security.

Differentiation with respect to network management: _____

_____ (1)

Differentiation with respect to security: _____

_____ (1)

Please turn the page.

Question 3**K-6 (4 marks)**

- Jamie and the rest of the network team are refurbishing the network at the Valletta branch.
- The network will connect the bank's laptops, desktop computers, and other devices such as printers.
- The team is creating the branch's network plan using CISCO symbols.

a. Identify each network device symbol shown in Table 1 below.

Table 1: CISCO Devices Symbols		
	Symbol	Name
Device 1		_____
Device 2		_____
Device 3		_____
Device 4		_____

(Source: <https://vecta.io/>)

(1)

b. State the use of the following network devices:

i. Switch: _____
 _____ (0.5)

ii. Host: _____
 _____ (0.5)

c. Jamie found a network switch which will be used at the renovated branch.

The specifications for this network switch are given in Table 2.

Table 2: Specifications for Switch

Interface	16 10/100/1000 Mbps RJ45 Ports (Auto Negotiation/Auto MDI/MDIX) 2 Gigabit SFP Ports
LED	System Power Link/Act indicators per port built into each RJ-45 port
Dimensions	440 × 180 × 44 mm
Packet Forwarding Rate	23.8 Mbps
MAC Address Table	8K
Mounting	Rack Mountable
Power Supply	100-240V AC, 50/60 Hz

(Adapted from: <https://www.tp-link.com>)

Outline the following specifications for the switch specified in Table 2.

i. Number of ports: _____

_____ (1)

ii. Power source: _____

_____ (1)

Question 4

K-8 (4 marks)

Jamie and his colleagues have assigned different user rights to the employees, depending on their role within the bank.

a. List **TWO** different local user accounts, apart from 'guest' account.

Local User Account 1: _____ (0.5)

Local User Account 2: _____ (0.5)

This question continues on next page.

b. Describe the purpose of the **TWO** local user accounts you listed in Question 4 (a).

Purpose of Local User Account 1: _____

_____ (0.5)

Purpose of Local User Account 2: _____

_____ (0.5)

c. i. Outline **TWO** advantages of online user accounts, apart from online storage.

Advantage 1: _____

_____ (0.5)

Advantage 2: _____

_____ (0.5)

ii. Outline **TWO** disadvantages of online user accounts, apart from security issues with Single Sign-On (SSO).

Disadvantage 1: _____

_____ (0.5)

Disadvantage 2: _____

_____ (0.5)

Question 5**K-10 (4 marks)**

- The bank's network security is a top priority for the bank's network team.
- All essential steps are being implemented to safeguard both wired and wireless connections against possible network security threats.

a. List **FOUR** different network security threats, apart from denial of service attack.

Network security threat 1: _____ (0.25)

Network security threat 2: _____ (0.25)

Network security threat 3: _____ (0.25)

Network security threat 4: _____ (0.25)

b. State **FOUR** different protection measures for a networked device, apart from backups.

Protection measure 1: _____
_____ (0.25)

Protection measure 2: _____
_____ (0.25)

Protection measure 3: _____
_____ (0.25)

Protection measure 4: _____
_____ (0.25)

c. Outline the following **FOUR** protection measures for a wireless network.

hide SSID	WPA2	MAC address filtering
update the access point firmware		

This question continues on next page.

