



**L-Università
ta' Malta**

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2024 MAIN SESSION**

SUBJECT:	Information Technology
PAPER NUMBER:	Controlled – Unit 3
DATE:	22 nd April 2024
TIME:	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

- Maria is currently refurbishing her newly bought apartment.
- Some of the refurbishing works include setting up a network.
- Maria is not very knowledgeable about networks and would like to know more about this topic.

Question 1

K-1 (4 marks)

a) Define the term 'network'.

(1)

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

Purpose 1: _____
_____ (0.5)

Purpose 2: _____
_____ (0.5)

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

Use of networks at home: _____

_____ (1)

Use of networks in cars: _____

_____ (1)

Question 2

K-2 (4 marks)

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

Network 1: _____ (0.5)

Network 2: _____ (0.5)

b) Outline HAN and PAN based on geographical area.

Outline of HAN (Home Area Network): _____

_____ (0.5)

Outline of PAN (Personal Area Network): _____

_____ (0.5)

c) While carrying out online research, Maria came across two types of network architectures: client-server and peer-to-peer.

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

i. Differentiation with respect to Cost: _____

_____ (1)

ii. Differentiation with respect to Network Management: _____

_____ (1)

Please turn the page.

Question 3

K-6 (4 marks)

- Maria is thinking about the network plan for her apartment.
- She will be using CISCO symbols to determine where to place different networking devices within her apartment.

a) Identify each network device symbol shown in the table below.

Table 1: CISCO Devices Symbols

	Symbol	Name
Device 1	 <p>(Source: https://vecta.io)</p>	_____
Device 2	 <p>(Source: https://vecta.io)</p>	_____
Device 3	 <p>(Source: https://vecta.io)</p>	_____
Device 4	 <p>(Source: https://www.conceptdraw.com)</p>	_____

(1)

b) State the use of the following network devices:

i. Modem: _____
 _____ (0.5)

ii. Repeater: _____
 _____ (0.5)

c) Table 2 lists some specifications of the repeater Maria intends to install in her apartment.

Table 2: Specifications for Repeater
 (Adapted from: <https://www.tp-link.com>)

Plug Type	EU, UK, US
Interface	1 * 10/100M Ethernet Port (RJ45)
Ports	1 * 10/100Mbps Ethernet Port (RJ45)
Input Power	100-240V~50/60Hz
Wireless Standards	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
Antenna	2 * internal
Frequency	2.4~2.4835GHz

Outline the following specifications based on Table 2.

i. Power Source: _____

 _____ (1)

ii. Connectivity Medium: _____

 _____ (1)

Question 4

K-8 (4 marks)

- Maria wants each member of the family to have different access rights.
- She decided to set different user accounts for each one of them.

a) List **TWO** different local user accounts, apart from the 'administrator' 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) Outline **TWO** advantages and **TWO** disadvantages of online user accounts.

Advantage 1: _____

_____ (0.5)

Advantage 2: _____

_____ (0.5)

Disadvantage 1: _____

_____ (0.5)

Disadvantage 2: _____

_____ (0.5)

