L-Università ta' Malta

MATSEC
Examinations Board

Marking Scheme

SEC Information Technology Unit 3

Main Session 2025
3rd April 2025

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In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with the MATSEC Examinations Board when in doubt.

Criteria Reference	The candidate should be able to:	Question Number	Maximum marks that can be achieved	Allocation of marks NOT to be subdivided any further than indicated below	Example of Expected Answer Other valid answers are to be accepted unless stated otherwise
		Q1	**4**		
K-1	MQF 1: Define a network.	1a	1	Award 0.5 marks for each correct part of the definition.	Students are expected to define the term *network*. A possible definition is: A network is a **group of devices** which are **connected together**.
	MQF 2: State the purpose of a network.	1b	1	Award 0.5 marks for each correct purpose stated.	Students are expected to state **TWO** purposes of a network, apart from sharing of data such as: • Sharing of hardware • Communication • Sharing of software The following is a possible answer: Through a network one can **share software** between computer systems. Sharing of data should not be accepted.
	MQF 3: Outline the use of networks in different places.	1c	2	Award 1 mark for each correct use outlined.	Students are expected to outline **ONE** use of networks at school and **ONE** use of networks at petrol stations. The following are possible answers: Schools: At school, networks allow students and teachers to share information and collaborate on projects online. Petrol stations: In a petrol station, networks allow communication between pumps and the central payment system.

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K-2		**Q2**	**4**		
	MQF 1: Name different types of networks.	2a	1	Award 0.5 marks for each correct type of network.	Students are expected to name **TWO** different types of networks, apart from LAN and CAN such as: PAN, HAN, MAN, WAN LAN and CAN should not be accepted.
	MQF 2: Outline different types of networks based on geographical area.	2b	1	Award 0.5 marks for each correct outline.	Students are expected to outline the **TWO** given networks, LAN and CAN, with respect to geographical area. The following are possible answers: *LAN*: LAN is a type of network which connects computer systems and devices within a small geographical area such as a house or a building. *CAN*: CAN is a network which connects multiple Local Area Networks located within a limited geographical area such as the campus of a university.

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	MQF 3: Differentiate between client-server and peer-to-peer architectures.	2c	2	Award 1 mark for each correct differentiation.	Students are expected to differentiate between client-server and peer-to-peer network architectures with respect to *security* and *cost.* Example of a good answer: *Differentiation with respect to security:* A client-server network architecture is more secure than peer-to-peer. In a client-server all data is stored centrally on a server and hence can be easily protected through robust security measures, whereas in a peer-to-peer architecture data is spread across multiple devices making it harder to implement robust security measures across all devices.
K-6		**Q3**	**4**		
	MQF 1: Identify network devices symbols.	3a	1	Award 0.25 marks for each correctly identified symbol.	Students are expected to identify the **FOUR** given CISCO network device symbols: Device 1: Modem Device 2: Repeater Device 3: Switch Device 4: Host ***or*** Standard Host Other answers should not be accepted.

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	MQF 2: State the use of different network devices.	3b	1	Award 0.5 marks for each correct use stated.	Students are expected to state the use of access point and router. Example of a good answer: i. Access Point: An **access point** is used to allow devices to connect to the network wirelessly. ii. Router: A **router** is used to manage and direct data packets between different networks ensuring they reach their intended destination.
	MQF 3: Outline specifications for a network device.	3c	2	Award 1 mark for each correct outline.	Students are expected to outline the following **TWO** specifications: the number of ports and the power source, for the given router. Possible answers include: *Number of Ports*: The router has a total of 4 ports for data transmission: 3 LAN ports and 1 LAN/WAN port. *Note: The Antenna Interfaces are not to be considered as ports.* *Power Source*: The router is powered by means of a transformer as it requires a 12V power supply. *Note: Marks should not be awarded if students copy answers word by word from the provided specifications (Table 2).*

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K-8		**Q4**	**4**		
	MQF 1: List different local user accounts.	4a	1	Award 0.5 marks for each correct local user account listed.	Students are expected to list **TWO** different local user accounts apart from the standard account, such as: • Administrator • Guest Standard should not be accepted as a correct answer.
	MQF 2: Describe the purpose of different local user accounts.	4b	1	Award 0.5 marks for each correct description.	Students are expected to describe the purpose of the **TWO** local user accounts they listed in Question 4a. The following is a possible answer: *Administrator*: This account is used to grant complete access to the computer system. An administrator has the utmost rights and privileges with respect to other local user accounts since it can create other user accounts, set permissions, and access security settings.
	MQF 3: Outline the advantages and disadvantages of online user accounts.	4c	2	Award 0.5 marks for each correct advantage outlined. Award 0.5 marks for each correct disadvantage outlined.	Students are expected to outline **TWO** advantages and **TWO** disadvantages of online user accounts. Outline of possible advantages such as: • synchronisation between computer systems • access to files saved on other devices • online storage

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					The following is a possible answer: *Advantage of online storage:* Through online user accounts users can store data and files online on the cloud without having to store them on their local storage devices. Outline of possible disadvantages such as: • security issues with Single Sign-On (SSO) • dependency on internet connection • privacy of information *Disadvantage of privacy of information:* When using online user accounts, all data, including personal information, is stored online, which can lead to concerns about the privacy of information and potential breaches.
K-10		**Q5**	**4**		
	MQF 1: List network security threats.	5a	1	Award 0.25 marks for each correct network security threat listed.	Students are expected to list **FOUR** network security threats, apart from phishing, such as: • Malware • Botnet • Hacking • Denial of service attack • Spam Phishing should not be accepted as a valid answer.

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	MQF 2: State protection measures for a networked device.	5b	1	Award 0.25 marks for each correct protection measure stated.	Students are expected to state **FOUR** protection measures for a networked device, apart from firewall and sand boxing, such as: • Restore point • Security updates • Disk freezing • Backups • Anti-malware The following is a possible answer: Install **anti-malware** software and allow it to run in the background. Firewall and sand boxing should not be accepted as valid answers.
	MQF 3: Outline protection measures for a wireless network.	5c	2	Award 0.5 marks for each correct protection measure outlined.	Students are expected to outline **FOUR** protection measures for a wireless network, apart from WEP and MAC address filtering, such as: • WPA • WPA2 • Hide SSID • Access point username and password • Turn off Wi-Fi Protected Setup (WPS) • Update the access point firmware The following is a possible answer: Regularly **update the access point firmware** to make sure that the device is in line with the latest features and security updates. WEP and MAC address filtering should not be accepted.