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| SUBJECT:    | <b>Information Technology</b>  |
| UNIT:       | 2  |
| ASSIGNMENT: | 3 – Controlled   |
| TITLE:      | Setting sharing permissions and securing the network for Sportsmania |
| DATE SET:   | 15th April 2024  |
| DEADLINE:   | 15th May 2024  |

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### General Instructions

- Lines provided for sub-questions (a) and (b) indicate the length expected in the candidate's answers.
- Students are to autonomously answer sub-questions (c). Therefore, lines provided do **not** necessarily indicate the length and depth of the expected answer.
- Application criteria will be assessed in class.
- The time required to complete practical tasks will be communicated by the teacher.
- Answers may be either in English or in Maltese.

### Candidate's Declaration of Authenticity

I, the undersigned, \_\_\_\_\_ (*Name and Surname*), declare that all the work I shall submit for this assignment will be my own.

I further certify that if I use the ideas, words, or passages from existing sources, I will quote those words or paraphrase them and reference them by making use of a reference system.

I am aware that should I submit work which is not mine, or work which has been copied from one or more sources, I will be penalised as per MATSEC Examinations Board policies related to plagiarism.

Candidate's Signature: \_\_\_\_\_

I.D. Card No.: \_\_\_\_\_

Date: \_\_\_\_\_

### General Scenario

- Sportsmania is a chain of shops which sells sportswear and sports equipment.
- The shops are located in Mosta, Valletta and St. Julians.
- To facilitate communication and sharing of data, Sportsmania makes use of networks.
- Employees are given different sharing permissions based on their roles in the company.

### SECTION A – WRITE-ON

#### Question 1

**K-7 (4 marks)**

The employees of Sportsmania are assigned 'read and execute' and 'modify' file and folder sharing permissions.

- a. i. List **TWO** types of file sharing permissions, apart from 'read and execute' and 'modify':

File sharing permission 1: \_\_\_\_\_

File sharing permission 2: \_\_\_\_\_

- ii. List **TWO** types of folder sharing permissions, apart from 'read and execute' and 'modify':

Folder sharing permission 1: \_\_\_\_\_

Folder sharing permission 2: \_\_\_\_\_

- b. Outline **ONE** file and **ONE** folder sharing permission from those you listed in Question 1a.

File sharing permission: \_\_\_\_\_

Outline: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Folder sharing permission: \_\_\_\_\_

Outline: \_\_\_\_\_

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- c. i. Describe **ONE** situation where the 'read and execute' file sharing permission might be required for employees working at Sportsmania shops.

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- ii. Describe **ONE** situation where the 'modify' folder sharing permission might be required for employees working at Sportsmania shops.

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**Question 2**

**K-8 (4 marks)**

Lately, Sportsmania employees have been complaining about receiving a lot of spam.

a. List **FOUR** network security threats, apart from spam.

Network security threat 1: \_\_\_\_\_

Network security threat 2: \_\_\_\_\_

Network security threat 3: \_\_\_\_\_

Network security threat 4: \_\_\_\_\_

b. The managers of Sportsmania decided to implement different measures to protect their network devices.

State **FOUR** protection measures which might be used to protect networked devices, apart from disk freezing and sandboxing.

Protection measure 1: \_\_\_\_\_

\_\_\_\_\_

Protection measure 2: \_\_\_\_\_

\_\_\_\_\_

Protection measure 3: \_\_\_\_\_

\_\_\_\_\_

Protection measure 4: \_\_\_\_\_

\_\_\_\_\_

c. Outline **FIVE** protection measures which Sportsmania can implement to protect their wireless network, apart from WPA, MAC address filtering, and hiding of SSID.

Protection measure 1: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Protection measure 2: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Protection measure 3: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Protection measure 4: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Protection measure 5: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Question 3**

**C-3 (6 marks)**

**Scenario (continued)**

- Tom is a supervisor at Sportsmania’s Mosta shop.
- While he was abroad on work, he needed to check some files stored online.
- He connected his laptop to the hotel's unsecured wireless network to access the files.

a. State **FOUR** different repercussions of connecting to the hotel’s unsecured wireless network.

Repercussion 1: \_\_\_\_\_

Repercussion 2: \_\_\_\_\_

Repercussion 3: \_\_\_\_\_

Repercussion 4: \_\_\_\_\_

b. Explain the **FOUR** repercussions you stated in Question 3a.

Explanation of repercussion 1:

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Explanation of repercussion 2:

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Explanation of repercussion 3:

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Explanation of repercussion 4:

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- c. In the hotel suggestion box, Tom suggested that the hotel’s wireless network can be secured through MAC address filtering and by hiding the SSID.

Justify the **TWO** protection measures in this scenario. Make sure that a different reason is provided to justify each protection measure.

Justification of MAC address filtering:

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Justification of hiding the SSID:

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## SECTION B - PRACTICAL

### Background Information

- Paula is a salesperson at Sportsmania St Julian's shop.
- She wants to share a text file about the shop's policies with other employees.
- She also wants to share a printer between all computers within the shop.
- Paula would like you to take care of this, but before you are asked to carry out some practice at school.
- Hence, you need to practise how to:
  - a. share a file and a printer between two computers.
  - b. modify file and printer sharing permissions while ensuring their correct implementation.

### Question 1

**A-4 (10 marks)**

**THIS QUESTION WILL BE PROVIDED BY THE TEACHER  
DURING THE PRACTICAL SESSION/S**

## SECTION C - PRACTICAL

### Background Information

- Paula wants to keep her work computer and wireless network safe from dangers.
- She would like you to:
  - a. protect the computer system using a third-party Internet security suite.
  - b. modify firewall settings to block a website and a program.
  - c. protect a wireless router from unauthorised access.
- First, you are required to practise this task at school, and then make sure Paula's computer and wireless network are safe.

### Question 1

**A-5 (10 marks)**

**THIS QUESTION WILL BE PROVIDED BY THE TEACHER  
DURING THE PRACTICAL SESSION/S**