MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

SECONDARY EDUCATION APPLIED CERTIFICATE LEVEL
2023 MAIN SESSION

L-Università
ta' Malta

SUBJECT:	**Information Technology**
UNIT:	2
ASSIGNMENT:	3 – Controlled
TITLE:	Setting sharing permissions and network security for TechRes
DATE SET:	25th April 2022
DEADLINE:	23rd May 2022

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

- TechRes is a new research company.
- The company makes use of a wireless network for their day-to-day operations.
- Different employees in the company can access different files and folders.

SECTION A – WRITE-ON

Question 1   **K-7 (4 marks)**

Different sharing permissions are assigned to every employee in the company.

a. i. List **TWO** types of file sharing permissions:

File sharing permission 1: _____

File sharing permission 2: _____

ii. List **TWO** types of folder sharing permissions:

Folder sharing permission 1: _____

Folder sharing permission 2: _____

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

File sharing permission: _____

Outline: _____

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Folder sharing permission: _____

Outline: _____

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c. i. Describe **ONE** situation where the file sharing permission outlined in Question 1b might be required by TechRes.

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ii. Describe **ONE** other situation where the folder sharing permission outlined in Question 1b might be required by TechRes.

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Question 2   K-8 (4 marks)

The managers of the company are worried about the different threats that can be met when connected to a network.

a. List **FOUR** network security threats.

Network security threat 1: _____

Network security threat 2: _____

Network security threat 3: _____

Network security threat 4: _____

b. State **FOUR** protection measures which might be used by TechRes to protect their networked devices.

Protection measure 1: _____

Protection measure 2: _____

Protection measure 3: _____

Protection measure 4: _____

c. Outline **FIVE** protection measures which might be employed by TechRes to protect their wireless network, except for WPA and Wi-Fi Protected Setup (WPS).

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Question 3   **C-3 (6 marks)**

Scenario (continued)

- Peter works at TechRes company.
- Once a week he works from home.
- Peter uses his laptop to access work-related documents which are stored online.
- To do so, Peter connects to his home unsecured wireless network.

a. State **FOUR** different repercussions of having an unsecured wireless network in this scenario.

Repercussion 1: _____

Repercussion 2: _____

Repercussion 3: _____

Repercussion 4: _____

b. Explain the **FOUR** repercussions 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. Justify **TWO** protection measures which might be implemented by Peter to secure his home wireless network. Make sure that a different reason is provided to justify each protection measure.

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References used in presenting answers:

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SECTION B - PRACTICAL

Background Information

- Peter wants to share a common folder and a printer between his computer and the one used by his children.
- He would like you to do this for him.
- You will be asked to carry out some practice at school before going to Peter.
- In fact, you need to practice how to:
  a. share a folder and a printer between two computers.
  b. modify folder 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

- Peter would like you to protect his home computer and wireless network from threats.
- You are required to:
  a. protect a 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.
- You will be asked to carry out some practice at school before carrying these settings on Peter's computer.

Question 1   **A-5 (10 marks)**

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