L-Università ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION APPLIED CERTIFICATE LEVEL
2024 MAIN SESSION**

SUBJECT:	**Information Technology**
UNIT:	2
ASSIGNMENT:	3 – Controlled
TITLE:	Set sharing permissions and secure the network for DFX
DATE SET:	17th April 2023
DEADLINE:	17th May 2023

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

- DFX is an accounting company which has been operating for the past 5 years.
- It makes use of a network to facilitate sharing of data and devices.
- Employees working at DFX are provided with different sharing permissions.

SECTION A – WRITE-ON

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

Most of the employees have read and write sharing permissions amongst others.

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

File sharing permission 1: _____

File sharing permission 2: _____

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

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: _____

_____

_____

c. i. Describe **ONE** situation where the 'read' file sharing permission might be required by DFX employees.

_____

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ii. Describe **ONE** situation where the 'write' folder sharing permission might be required by DFX employees.

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Question 2   K-8 (4 marks)

DFX has recently experienced a Denial of Service attack.

a. List **FOUR** network security threats, apart from Denial of Service attack.

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 DFX to protect their networked devices, apart from firewall and backups.

Protection measure 1: _____

_____

Protection measure 2: _____

_____

Protection measure 3: _____

_____

Protection measure 4: _____

_____

c. Outline **FIVE** protection measures which might be implemented by DFX to protect their wireless network, apart from WEP and MAC address filtering.

Protection measure 1: _____

_____

_____

Protection measure 2: _____

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Protection measure 3: _____

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Protection measure 4: _____

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Protection measure 5: _____

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

Scenario (continued)

- Mark works at DFX.
- He visits clients' premises to help them with their financial needs.
- One day, Mark wanted to access some of the company's documents which are stored online.
- He accessed the documents by connecting to the client's unsecured wired network.

a. State **FOUR** different repercussions of having an unsecured wired 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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_____

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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. Mark suggested the client to secure the wired network through firewalls and backups.

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

Justification of firewall:

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Justification of taking backups:

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References used in presenting answers:

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SECTION B - PRACTICAL

Background Information

- John is a manager at DFX.
- He wants to share a text file and a printer between his computer and that used by the employees.
- He asked for your help to do so.
- You will be asked to carry out some practice at school before helping John.
- Hence, you need to practice 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

- John wants to protect his work computer and wireless network from threats.
- He 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.

- You are required to practice this task at school before carrying out the necessary protection measures on John's computer and wireless network.

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

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