



**L-Università
ta' Malta**

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2018 MAIN SESSION**

SUBJECT:	Information Technology
PAPER NUMBER:	Controlled – Unit 1
DATE:	29 th May 2018
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 _____

Notes to Students:

- Answer **ALL** questions in the space provided.

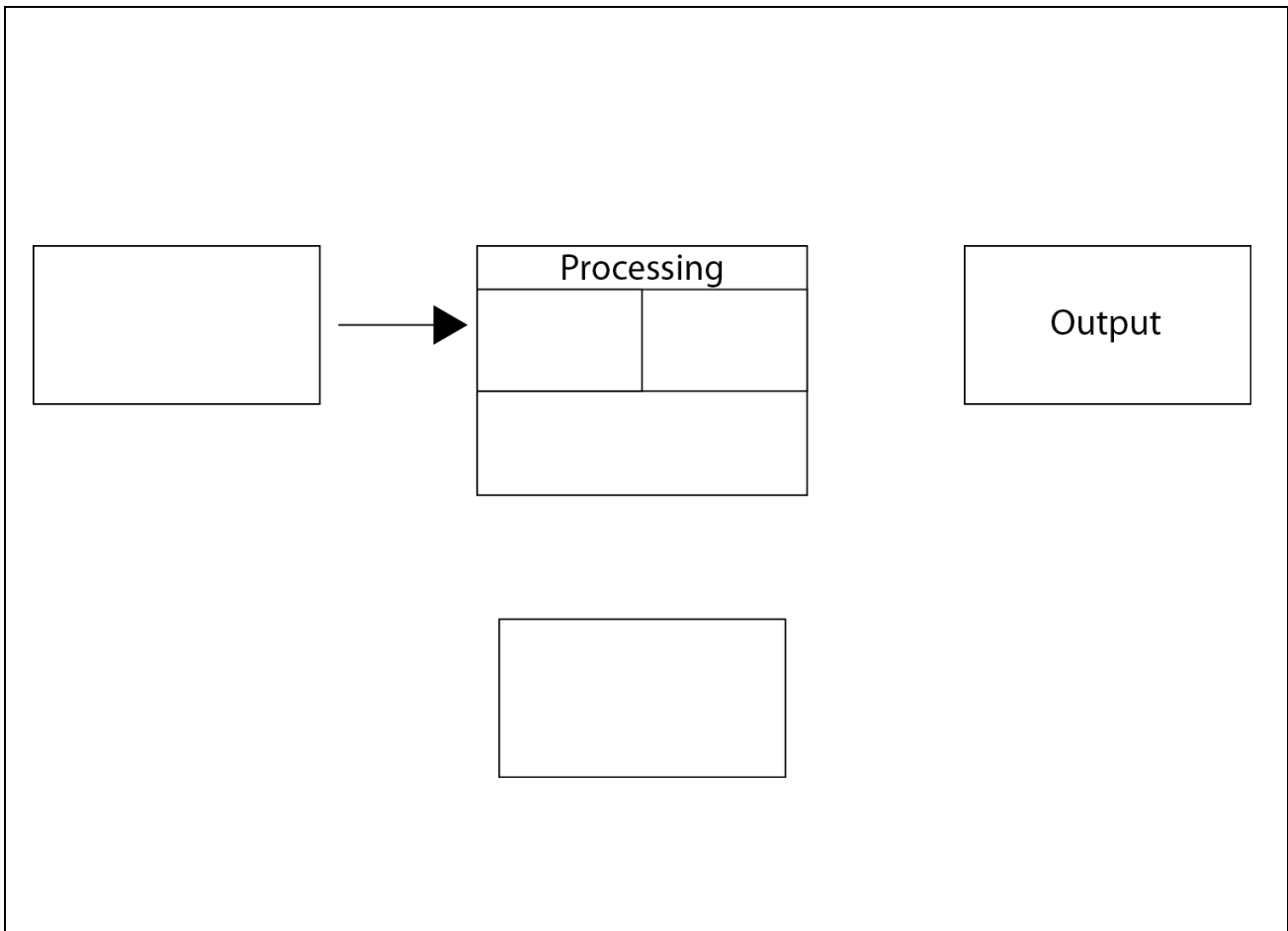
Scenario

Your recently retired neighbour has decided that it was time to start getting into the world of computers. Your neighbour has got to know that you are following an IT course and has asked for your help in order to get familiarised with computers.

Question 1

K3 (4 marks)

To help your neighbour better understand what a computer system is, complete the following data flow diagram by labelling the boxes accordingly and including the necessary arrows.



Question 2

K1 (4 marks)

Your neighbour was surprised to discover that there are many different types of computer systems. Help your neighbour understand them better by answering the following questions about computer systems. For each question pick **ONE** of the systems provided below. Each system can be used once, more than once, or not at all.

desktop, laptop, smartphone, tablet, e-book reader, gaming rig

a. Which of the systems listed above is the most expensive?

_____ (1)

b. Which system is the fastest?

_____ (1)

c. Which system is the smallest?

_____ (1)

d. Which system cannot be used for multiple tasks?

_____ (1)

Question 3

K5 (4 marks)

Your neighbour is confused by the several different peripheral devices available. Help the neighbour understand the use of some of the devices by writing the name of the correct device for each scenario. Each device can be used once, more than once, or not at all.

optical character reader, 3D scanner, monitor, plotter, hard disk, flash drive,
braille keyboard, eye tracking system, printer

a. A small, portable device which can be used to save files on.

_____ (1)

b. A specialist input device that allows a visually impaired user to type and enter text or instructions for the computer.

_____ (1)

c. A device which turns digital copies of images or documents into physical copies.

_____ (1)

d. A device that uses magnetic storage to save and retrieve data using a number of rotating disks.

_____ (1)

Question 4

K6 (4 marks)

Your neighbour would like to have access to the internet throughout the house. Outline the purpose of each of the following devices/objects in a network setup.

a. Modem

(1)

b. Router

(1)

c. Ethernet cable

(1)

d. Network Interface Card (NIC)

(1)

Question 5

K9 (4 marks)

Your neighbour has learnt the term firewall, however s/he is still confused about what it does.

a. Outline how blacklisting helps a firewall improve network security.

(1)

b. Read the following statements and identify whether they are True or False.

Statement	True/ False
A firewall can be both hardware and software based.	(1/2)
A firewall can detect and remove viruses, Trojans and other malware.	(1/2)
By using a firewall, a user can control which programs have access to the internet.	(1/2)
A firewall only monitors incoming data.	(1/2)
A firewall can offer protection against spyware software.	(1/2)
A firewall can alert and protect networks from unauthorised access.	(1/2)

Question 6

C4 (6 marks)

The neighbour has two young grandchildren and is worried about letting them use the computer unrestricted.

a. Describe the term standard user groups.

(1)

b. What type of user group should be used for the neighbour?

(1/2)

c. What type of user group should be used for the grandchildren?

(1/2)

This question continues on the next page.

The neighbour likes to cook with the grandchildren and would like to have the recipes on the computer. However, the grandchildren should **not** be able to change the recipes.

d. Describe the term sharing permission.

(1)

e. Describe what a user would be able to do with a file if it had the following permissions:

i. Read/Write.

(1)

ii. Read Only.

(1)

iii. Full control.

(1)

Question 7**C1 (6 marks)**

The neighbour would like to purchase tablets for the grandchildren but is not sure which one to choose. The youngest grandchild, Clara, likes to watch a lot of movies and spends a lot of time taking photos of everything. The other grandchild, Kevin, likes to play games a lot and read fantasy novels.

Look at the systems listed below and answer the questions.

	System 1	System 2	System 3
Model	12V64	Switch	Transformer Book
Processor Type and Speed	Intel Atom x5-Z8300 1.4 GHz	Intel Atom x5-Z8350 1.4 GHz	Intel Atom Z8350 1.9 GHz
Memory	2GB	4GB	4GB
Hard Drive Size	128GB	64GB	64GB
Screen Size	12.2"	10.1"	13.5"
Max Resolution	1920 x 1200	1280 x 800	1280 x 800
Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics
Colour	Black	Silver	Grey
Card Reader	Yes	Yes	Yes
Bluetooth	Yes	Yes	Yes
Wifi	Yes	Yes	Yes
Ports	1 x USB 2.0 1 x micro USB 1 x micro HDMI 1 x micro SD 1 x 3.5mm audio jack	1 x USB 2.0 1 x micro USB 1 x micro HDMI 1 x 3.5 mm audio jack	1 x micro HDMI 1 x USB 2.0 1 x micro USB 1 x 3.5 mm audio jack
Camera	8MP rear 5MP front	2MP rear 2MP front	5MP rear 2MP front
Weight	601g	1260g	580g
Battery Life	8 hrs	11 hrs	9 hrs
Price	€399.00	€360.00	€425.00

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a. Which system is best suited for Clara?

_____ (1)

b. Provide **TWO** reasons for your answer.

i. Reason 1

_____ (1)

ii. Reason 2

_____ (1)

c. Which system is best suited for Kevin?

_____ (1)

d. Provide **TWO** reasons for your answer.

i. Reason 1

_____ (1)

ii. Reason 2

_____ (1)

Question 8

C5 (6 marks)

Your neighbour has only recently started using the internet and is not aware of the dangers that may be encountered.

a. Mention **ONE** network security threat. Explain how this network security threat can be detrimental to a network

(2)

b. Explain how the following **FOUR** network protection systems help to protect networks and data:

i. Backup

(1)

ii. Security updates

(1)

iii. Sand boxing

(1)

iv. Disk Freezing

(1)

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