



**L-Università  
ta' Malta**

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE  
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL  
2024 MAIN SESSION**

---

<b>SUBJECT:</b>	<b>Information Technology</b>
<b>PAPER NUMBER:</b>	Controlled – Unit 1
<b>DATE:</b>	10 <sup>th</sup> May 2022
<b>TIME:</b>	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** \_\_\_\_\_

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

**Scenario**



- 'Gaming Guru' is a gaming company.
- Although new, the company is steadily attracting clients.

**Question 1**

**K-1 (4 marks)**

- The directors of 'Gaming Guru' emphasise the importance of Health and Safety.
- Hence, they try to reduce the number of hazards present at the company's premises.

a) Identify the **TWO** hazards shown in the images below.

	Image	Hazard
i.	 <p>(Source: <a href="https://www.istockphoto.com/">https://www.istockphoto.com/</a>)</p>	<hr/> <p style="text-align: right;">(0.5)</p>
ii.	 <p>(Source: <a href="http://helptohealthchiropractic.co.uk">helptohealthchiropractic.co.uk</a>)</p>	<hr/> <p style="text-align: right;">(0.5)</p>

b) List **ONE** risk for each hazard mentioned in Question 1a.

Risk from Hazard 1: \_\_\_\_\_ (0.5)

Risk from Hazard 2: \_\_\_\_\_ (0.5)

c) Outline **ONE** possible precaution which might be taken to minimise each of the risks listed in Question 1b.

Precaution for Risk 1: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

Precaution for Risk 2: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

**Question 2**

**K-3 (4 marks)**

'Gaming Guru' has just bought new computer systems for all its employees.

a) List **FOUR** different types of computer systems, except for laptop and desktop computer.

Computer System 1: \_\_\_\_\_ (0.25)

Computer System 2: \_\_\_\_\_ (0.25)

Computer System 3: \_\_\_\_\_ (0.25)

Computer System 4: \_\_\_\_\_ (0.25)

***This question continues on next page.***

- b) • One of the employees of 'Gaming Guru' is blind.
- He is still capable of writing computer programs by using special computer hardware.
- He then listens to the code which he has typed down.

From the box below, select an appropriate input and output device for this employee.

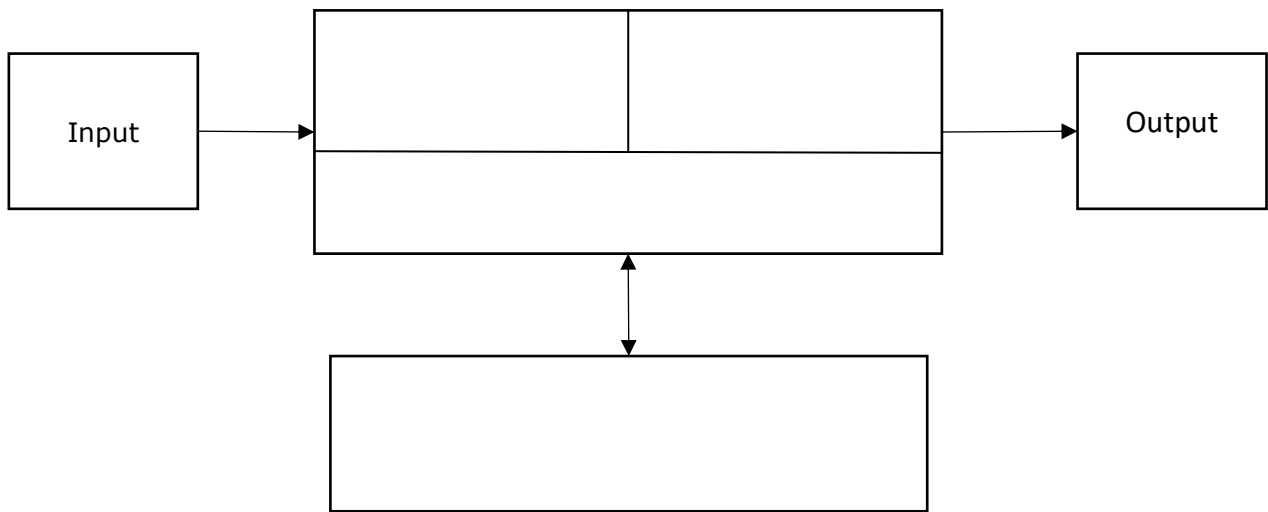
Trackball, Scanner, Braille keyboard, Barcode reader, Monitor, Projector, 3D-scanner, Headphones, Keyboard

Input Device: \_\_\_\_\_ (0.5)

Output Device: \_\_\_\_\_ (0.5)

- c) • 'Gaming Guru' has employed some student workers.
- One of the employees needs to show these student workers how data flows in a computer system.

Complete the following data flow diagram by filling in the empty blocks using appropriate words:



(2)

**Question 3**

**C-2 (6 marks)**

- a) • The directors of 'Gaming Guru' have given a laptop to some of their employees.
- This computer system will be used both when working on premises as well as offsite.
- It will be used mostly for programming new applications as well as sending emails.
- The laptops shown in Table 1 were considered.

Table 1: Laptop Specifications

	<b>Laptop A</b>	<b>Laptop B</b>
<b>Display</b>	15.6"	15.6"
<b>Processor speed</b>	3.2 GHz	3.5 GHz
<b>Cost</b>	€1110	€1025

Justify why Laptop B was chosen rather than Laptop A in terms of speed and cost:

i. Speed: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ (1)

ii. Cost: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ (1)

- b) • A graphics tablet and a 2D-Printer were bought to be used by graphics designers.
- They will be using them on their laptop to create images and logos.

i. Graphics Tablet B was bought. Justify this choice with respect to specifications and cost.

Table 2: Graphics Tablet Specifications

	<b>Graphics Tablet A</b>	<b>Graphics Tablet B</b>
<b>Active area</b>	152 x 95 mm	311 x 216 mm
<b>Resolution</b>	2540 lpi	5080 lpi
<b>Pressure sensitivity</b>	4096 levels	8192 levels
<b>Cost</b>	€130	€450

Justification in terms of specifications: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ (0.5)

Justification in terms of cost: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ (0.5)

***This question continues on next page.***

ii. Printer B was also bought. Justify this choice with respect to connectivity and after-sales service.

Table 3: Printer Specifications

	<b>Printer A</b>	<b>Printer B</b>
<b>Type</b>	Inkjet	Laser
<b>Colour output</b>	Colour	Colour
<b>Connectivity</b>	USB	Wi-Fi, USB, Ethernet
<b>Warranty</b>	1 year	2 years

Justification in terms of connectivity: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (0.5)

Justification in terms of after-sales service: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (0.5)

- c) • The company backs up all its data on external Solid-State Drives (SSD).
- Employees who had previous experience working in other companies stated that in their previous workplace, DVDs were used for backing purposes.

Justify why external Solid-State Drives are more appropriate than DVDs in terms of capacity and longevity of device.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

(2)

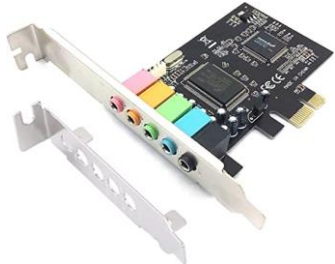



***Please turn the page.***

**Question 4**

**K-4 (4 marks)**

The directors of 'Gaming Guru' are considering upgrading the desktop computer used by the receptionist.

a) Label the following **FOUR** internal components.

	<b>Image</b>	<b>Internal Hardware Component Name</b>
i.	 <p>(Source: <a href="https://www.amazon.com">https://www.amazon.com</a>)</p>	<hr/> <p style="text-align: right;">(0.25)</p>
ii.	 <p>(Source: <a href="https://ricondizionatoonline.com">https://ricondizionatoonline.com</a>)</p>	<hr/> <p style="text-align: right;">(0.25)</p>
iii.	 <p>(Source: <a href="https://en.wikipedia.org">https://en.wikipedia.org</a>)</p>	<hr/> <p style="text-align: right;">(0.25)</p>
iv.	 <p>(Source: <a href="https://www.technologyuk.net">https://www.technologyuk.net</a>)</p>	<hr/> <p style="text-align: right;">(0.25)</p>



b) List **FOUR** reasons why a computer upgrade may be required.

Reason 1: \_\_\_\_\_  
\_\_\_\_\_ (0.25)

Reason 2: \_\_\_\_\_  
\_\_\_\_\_ (0.25)

Reason 3: \_\_\_\_\_  
\_\_\_\_\_ (0.25)

Reason 4: \_\_\_\_\_  
\_\_\_\_\_ (0.25)

c) Outline **TWO** implications related to computer upgrades.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

**Question 5**

**K-6 (4 marks)**

Some employees tried to install new internal hardware components on the receptionist’s desktop computer, but the installation was unsuccessful.

a) List **TWO** issues which can cause a hardware installation to be unsuccessful.

Issue 1: \_\_\_\_\_ (0.5)

Issue 2: \_\_\_\_\_ (0.5)

***This question continues on next page.***

b) State **ONE** way which can be used to confirm each issue listed in Question 5a.

Way to confirm issue 1: \_\_\_\_\_  
\_\_\_\_\_ (0.5)

Way to confirm issue 2: \_\_\_\_\_  
\_\_\_\_\_ (0.5)

c) Outline **ONE** possible solution to solve each of the **TWO** issues listed in Question 5a.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

**Question 6**

**K-8 (4 marks)**

It is important to write a documentation when installing internal hardware components.

a) Name **TWO** sections which form part of a Replacement/Installation/Upgrade (RIU) documentation apart from 'Reason for the RIU' and 'Solution Proposed'.

Section 1: \_\_\_\_\_ (0.5)

Section 2: \_\_\_\_\_ (0.5)

b) Outline the content of the **TWO** sections you named in Question 6a.

Content of section 1: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (0.5)

Content of section 2: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (0.5)



b) Identify **TWO** methods used for registering products from the ones provided below:

via USB	online	by post	by a photo
---------	--------	---------	------------

Method 1: \_\_\_\_\_ (0.5)

Method 2: \_\_\_\_\_ (0.5)

c) List **FOUR** advantages of product registration.

---

---

---

---

---

---

---

---

---

---

\_\_\_\_\_ (2)

**Question 8** **K-10 (4 marks)**

- 'Gaming Guru' emphasises the importance of carrying out regular computer maintenance.
- Some of the employees think that this is not beneficial.

a) State **TWO** reasons why computer maintenance is important.

Reason 1: \_\_\_\_\_  
\_\_\_\_\_ (0.5)

Reason 2: \_\_\_\_\_  
\_\_\_\_\_ (0.5)

b) Most employees have only heard about corrective and perfective maintenance. List **TWO** other types of computer maintenance.

Type of maintenance 1: \_\_\_\_\_ (0.5)

Type of maintenance 2: \_\_\_\_\_ (0.5)

c) Define the **TWO** types of computer maintenance you listed in Question 8b.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

(2)

**Question 9**

**C-5 (6 marks)**

The type of computer maintenance that needs to be done on a computer system depends on the particular situation.

a) Situation 1: The management wants to make sure that no data is lost.  
i. Identify the appropriate type of computer maintenance that should be used for this situation.

---

---

(1)

ii. Justify why you chose this type of computer maintenance.

---

---

---

---

---

(1)

iii. Explain the approach required to carry out this computer maintenance.

---

---

---

---

---

---

(1)

b) Situation 2: The primary hard disk drive of one of the laptops is not working.

i. Identify the appropriate type of computer maintenance that should be used for this situation.

\_\_\_\_\_ (1)

ii. Justify why you chose this type of computer maintenance.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

iii. Explain the approach required to carry out this computer maintenance.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

Blank Page

Blank Page