



L-Università  
ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE  
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL  
2021 SUPPLEMENTARY SESSION**

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|---------------|-------------------------------|
| SUBJECT:      | <b>Information Technology</b> |
| PAPER NUMBER: | Synoptic – Unit 1             |
| DATE:         | 3 <sup>rd</sup> November 2021 |
| TIME:         | 9:00 a.m. to 11:05 a.m.       |

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**THIS PAPER SHOULD BE RETURNED TO THE INVIGILATOR  
AFTER THE EXAMINATION.**

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

### Scenario

- 'Modern Press' is a newspaper agency located at Bulebel.
- This agency has a lot of computers and machinery used for publishing and printing materials.
- The owners of Modern Press are very much aware about the regulations which must be followed to ensure the safety of all their employees.

### Question 1

**K-1 (6 marks)**

- The owners of 'Modern Press' frequently visit the factory to inspect the working conditions.
- On one of their visits they found the following work practices which they were unhappy about.

a. Identify the hazards shown in the images below:



(Source: [www.lumobodytech.com](http://www.lumobodytech.com))

Hazard 1: \_\_\_\_\_ (1)



Source: [www.safetymattingsupplies.co.uk](http://www.safetymattingsupplies.co.uk)

Hazard 2: \_\_\_\_\_ (1)

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

Risk arising from hazard 1: \_\_\_\_\_ (1)

Risk arising from hazard 2: \_\_\_\_\_ (1)

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

Precaution to minimise risk 1: \_\_\_\_\_

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

Precaution to minimise risk 2: \_\_\_\_\_

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

## Question 2

**K-2 (8 marks)**

To reduce the possibility of accidents, the owners of 'Modern Press' were thinking about buying new safety signs. They are still unsure which safety signs to buy.

a. Match each safety sign with their correct meaning by drawing a line between them:



Fire extinguisher



No food or drink



Fire exit



No loose clothing

(2)

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

- b. Categorise the following **FOUR** safety signs, by writing 'X' in the category/categories they belong to.

| Safety Signs      | Categories   |                 |                      |
|-------------------|--------------|-----------------|----------------------|
|                   | Human Hazard | Hardware Hazard | Environmental Hazard |
| Fire extinguisher |              |                 |                      |
| No food or drink  |              |                 |                      |
| Fire exit         |              |                 |                      |
| No loose clothing |              |                 |                      |

(2)

- c. The owners of 'Modern Press' need to place some safety signs in their office shown in Figure 1 below.

Determine where the **TWO** safety signs mentioned below should be placed in this office, by indicating their placement in Figure 1.

Safety sign 1: Fire extinguisher (2)

Safety sign 2: Fire exit (2)



Figure 1: 'Modern Press' office  
Source: <https://www.vectorstock.com>

**Question 3****C-1 (12 marks)**

Some of the hardware components found at 'Modern Press' need to be replaced. The owners are aware that precautions must be taken prior to such a replacement.

- a. Outline **FOUR** consequences which can occur if the necessary precautions are not taken when hardware components are replaced, installed or upgraded:

Consequence 1: \_\_\_\_\_  
\_\_\_\_\_ (1)

Consequence 2: \_\_\_\_\_  
\_\_\_\_\_ (1)

Consequence 3: \_\_\_\_\_  
\_\_\_\_\_ (1)

Consequence 4: \_\_\_\_\_  
\_\_\_\_\_ (1)

- b. Determine **FOUR** costs which can be incurred if good practices are not followed during replacement, installation or upgrade of hardware.

Cost 1: \_\_\_\_\_  
\_\_\_\_\_ (1)

Cost 2: \_\_\_\_\_  
\_\_\_\_\_ (1)

Cost 3: \_\_\_\_\_  
\_\_\_\_\_ (1)

Cost 4: \_\_\_\_\_  
\_\_\_\_\_ (1)

- c. Analyse the cost of implementing **FOUR** precautions when compared to the cost of the hazard which would otherwise result.

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[illegible]

### Question 4

**K-3 (8 marks)**

Some of the employees of 'Modern Press' suggested using new computer systems.

- a. List **TWO** different types of computer systems:

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

Computer System 2: \_\_\_\_\_ (1)

- b. 'Modern Press' needs to buy input and output devices for its journalists. From the box below, select an appropriate input and output device for the company.

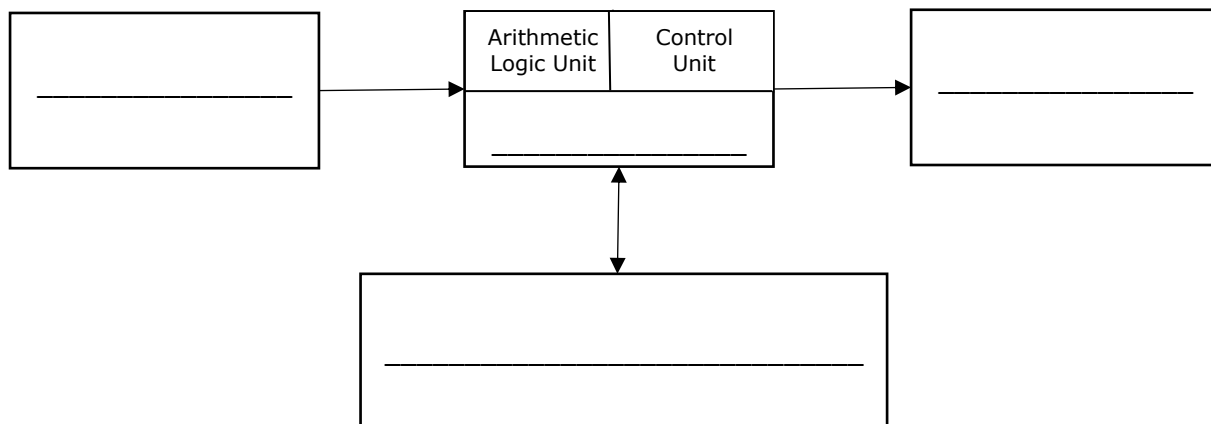
|          |                                      |         |            |                 |
|----------|--------------------------------------|---------|------------|-----------------|
| Keyboard | Magnetic Ink Character Reader (MICR) |         |            | Bar Code Reader |
|          | Plotter                              | Monitor | VR Headset |                 |

Input Device: \_\_\_\_\_ (1)

Output Device: \_\_\_\_\_ (1)

- c. The owners of 'Modern Press' want to understand better how information flows when a computer system is utilised.

Complete the following data flow diagram by labelling the boxes using appropriate words.



(4)

***Please turn the page.***

**Question 5****K-4 (8 marks)**

a. Some of the employees are interested in the internal parts of the computer system. Label the following **TWO** internal hardware components to help them.

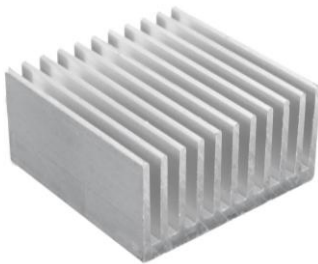
i.



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

Source: <https://www.bestbuy.com>

ii.



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

Source: <https://www.indiamart.com>

b. The managers at 'Modern Press' are aware that upgrades are essential when dealing with computer systems. List **FOUR** reasons why a computer upgrade may be required.

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

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

Reason 3: \_\_\_\_\_  
\_\_\_\_\_ (0.5)

Reason 4: \_\_\_\_\_  
\_\_\_\_\_ (0.5)

c. Outline **FOUR** implications of a computer upgrade.

(4)

### Question 6

**C-4 (12 marks)**

- An employee tried booting up one of the laptops.
- However, he kept getting the error displayed in the figure below.

The AC power adapter wattage and type cannot be determined.  
The battery may not charge.  
The system will adjust the performance to match the power available

Please connect a Dell 95W AC adapter or greater for best system performance

To resolve this issue, try to reseal the power adapter.

Strike the F3 key if you don't want to see power warning messages again.

Strike the F1 key to continue, F2 to run the setup utility  
Press F5 to run onboard diagnostics

a. Identify the hardware problem which has generated the above boot-up error?

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 (4)

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

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b. Describe **TWO** possible causes which might have caused the above error.

Possible cause 1: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

Possible cause 2: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

c. Explain **TWO** possible solutions which might help solve the generated boot-up error.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (4)

### Question 7

**K-8 (8 marks)**

When considering possible updates which might be required, the owners of 'Modern Press' also kept in mind the importance of an RIU (Replace/Install/Upgrade) documentation.

a. Name **FOUR** sections which form part of an RIU Documentation:

Section 1: \_\_\_\_\_ (0.5)  
Section 2: \_\_\_\_\_ (0.5)  
Section 3: \_\_\_\_\_ (0.5)  
Section 4: \_\_\_\_\_ (0.5)

b. Outline the content of any **TWO** sections mentioned in Question 7a.

Section: \_\_\_\_\_  
Content: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

Section: \_\_\_\_\_

Content: \_\_\_\_\_

(1)

c. Not all employees at 'Modern Press' understand the importance of having an RIU documentation.

Describe **FOUR** reasons why it is important to document RIU.

(4)

***Please turn the page.***

**Question 8****K-9 (8 marks)**

One of the employees at 'Modern Press' said that each new product purchased by the company should be registered.

a. Define the term 'product registration'.

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(2)

b. Identify **TWO** methods which can be used to register a product.

|            |         |        |             |
|------------|---------|--------|-------------|
| by calling | by post | online | by painting |
|------------|---------|--------|-------------|

i. \_\_\_\_\_ (1)

ii. \_\_\_\_\_ (1)

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

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(4)