



L-Università
ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2019 SUPPLEMENTARY SESSION**

SUBJECT:	Information Technology
PAPER NUMBER:	Synoptic – Unit 3
DATE:	5 th November 2019
TIME:	10:00 a.m. to 12:05 p.m.

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

Scenario

AngelCakes bakery in Msida has been open for a number of years and Ms. Grech, the owner, thinks it's time to do something about the older computers in the bakery as they have become unusable.

Question 1**(4 marks)**

After examining the bakery setup, you think that the computers might require an upgrade. State **FOUR** reasons which would require a computer upgrade.

Reason 1	(1)
Reason 2	(1)
Reason 3	(1)
Reason 4	(1)

Question 2**(9 marks)**

It is important that you check that the workplace where the upgrade is taking place follows the appropriate health and safety regulations.

Identify **SIX** health and safety practices that should be followed in the workplace.

a) _____ (1.5)

b) _____ (1.5)

c) _____ (1.5)

d) _____ (1.5)

e) _____ (1.5)

f) _____ (1.5)

Question 3**(6 marks)**

Whenever computers need to be upgraded there are always risks involved. Describe the following risks to Ms Grech. Provide **ONE** example for each risk.

a) Physical damage to equipment

(2)

b) Negative impact on data

(2)

c) Human injury

(2)




Please turn the page.


Question 4

(8 marks)

You bought a new motherboard for one of the bakery’s computers.

Identify which components are compatible or not with the given motherboard, by marking with a ✓ the appropriate checkbox for each.

Motherboard		
	Form Factor: ATX	
	CPU Socket: LGA1151	
	Memory Type: DDR4	
	Memory Speed: 2400MHz 2133MHz	
	Maximum Memory: 16GB	
	Expansion Slots: 3 x PCIe 3.0	
<p>Figure 1 - Motherboard Source: https://tinyurl.com/ybftmbk</p>	Internal I/O: 6x SATA III 6Gb/s	
CPU		
	Socket: LGA1151	<input type="checkbox"/> Compatible <input type="checkbox"/> Not Compatible
	Speed: 2.9GHz	
	Cache Size: 9MB	
<p>Figure 2 - CPU Source: https://tinyurl.com/y9yzt69p</p>	Heatsink: included	(2)
RAM		
	Form Factor: SODIMM	<input type="checkbox"/> Compatible <input type="checkbox"/> Not Compatible
	Capacity: 8GB	
	Memory Type: DDR4	
<p>Figure 3 - RAM Source: https://tinyurl.com/yaq9dw6y</p>	Memory Speed: 2133MHz	(2)
Hard Disk		
	Capacity: 250GB	<input type="checkbox"/> Compatible <input type="checkbox"/> Not Compatible
	Form Factor: 2.5"	
	Type: Solid State Drive	
<p>Figure 4 - Hard Disk Source: https://tinyurl.com/y7ges7qv</p>	Connection: SATA 3	(2)

Case		
	Model: CIT S003B	<input type="checkbox"/> Compatible <input type="checkbox"/> Not Compatible
	Colour: Black	
	Form Factor: Micro ATX	
<p><i>Figure 5 - Case</i> Source: https://tinyurl.com/ycso9u3n</p>	Power Supply: Included	(2)

Question 5

(9 marks)

There are a number of implications induced when hardware or software is upgraded or replaced. Identify and describe **THREE** implications of your choice.

a) _____

 _____ (3)

b) _____

 _____ (3)

c) _____

 _____ (3)

Please turn the page.

Question 6

(8 marks)

You decided to start upgrading the computer in Ms Grech’s office, however you notice that it is in use.

a) Identify the tool in Figure 6 below:



Figure 6: Tool

Source: <https://tinyurl.com/y9nortpo>

i. What is this tool?

_____ (0.5)

ii. Discuss **ONE** reason why it is important to use it before installing new components in an older PC.

_____ (1.5)

b) Discuss **ONE** precaution, not mentioned above, that needs to be taken for each of the following scenarios.

i. Installing a CPU

_____ (3)

ii. Installing a graphics card

_____ (3)

Question 7

(8 marks)

Outline the proper working procedures which must be followed when upgrading a computer system by placing the statements below in the correct order, starting from 1 to 8.

	Test the computer system
	Check for compatibility
	Prepare the necessary equipment and clean up the computer system
	Identify the problem and think of a possible solution
	Take data backups
	Set a system restore point
	Install components in the correct order
	Restore data and install the necessary software

(8)

Question 9**(4 marks)**

Ms Grech doesn't understand why certain upgrades were necessary. Help her understand by providing **TWO** reasons for upgrading the following components:

a) Power Supply Unit

i. _____
_____ (1)

ii. _____
_____ (1)

b) Graphics Card

i. _____
_____ (1)

ii. _____
_____ (1)

Question 10**(5 marks)**

Ms Grech wants to know why it's important to register products. Help her understand by listing **FIVE** advantages of registering products.

a) Advantage 1

_____ (1)

b) Advantage 2

_____ (1)

c) Advantage 3

_____ (1)

d) Advantage 4

_____ (1)

e) Advantage 5

_____ (1)

Please turn the page.

Question 11

(15 marks)

It is important to be properly prepared before carrying out any upgrade, replacement or installation procedure.

a) Provide the name and use for each of the tools shown below.



Figure 8: Tools
Source: <https://tinyurl.com/y8nmh9f3>

Tool name: (2)

Use: (3)



Figure 9: Tools
Source: <https://tinyurl.com/yccc33>

Tool name: (2)

Use: (3)

b) Write down the necessary preparations required to perform a hardware replacement/ installation/upgrade.

(5)

Question 12

(15 marks)

Now that all precautions and preparations are complete you can begin the installation process.

- a) Write down the necessary steps to remove the following components from the case:
 - i. Sound Card

(2.5)

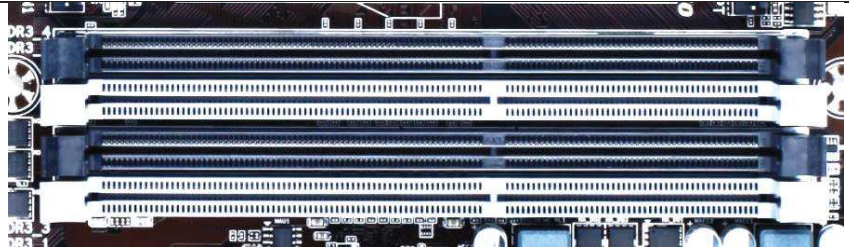
- ii. Optical Drive

(2.5)

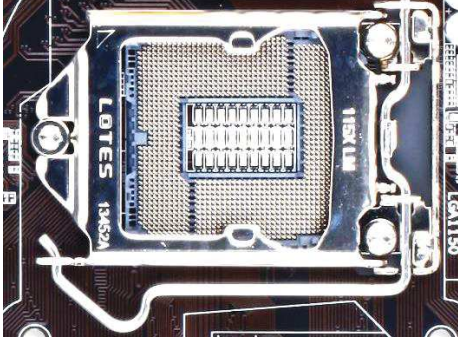


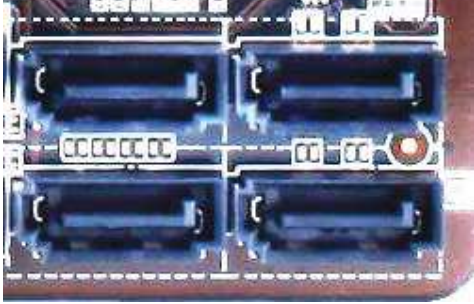
- iii. RAM

(2.5)

- b) Identify the motherboard sections shown below by writing the name next to the image.

Section	Name
 <p style="text-align: center;"> <i>Figure 10: Motherboard section</i> Source: https://www.quietpc.com/ga-h97-d3h </p>	(1.5)

This question continues on next page.

 <p>Figure 11: Motherboard section Source: https://www.quietpc.com/ga-h97-d3h</p>	<p>(1.5)</p>
 <p>Figure 12: Motherboard section Source: https://www.quietpc.com/ga-h97-d3h</p>	<p>(1.5)</p>
 <p>Figure 13: Motherboard section Source: https://www.quietpc.com/ga-h97-d3h</p>	<p>(1.5)</p>
 <p>Figure 14: Motherboard section Source: https://www.quietpc.com/ga-h97-d3h</p>	<p>(1.5)</p>