L-Università ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2018 SUPPLEMENTARY SESSION**

SUBJECT:	**Information Technology**
PAPER NUMBER:	Synoptic – Unit 1
DATE:	1st November 2018
TIME:	10:00 a.m. to 12:05 p.m.

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

Scenario

BestBooks Ltd. is a new bookstore in Sliema. The company has asked for your help in order to set up the computer system in the office and the store.

Question 1   **K2 (6 marks)**

Describe to BestBooks Ltd. **THREE** uses for each of the devices listed below:

a) Desktop PC

     i. Use 1:

_____ (1)

    ii. Use 2:

_____ (1)

   iii. Use 3:

_____ (1)

b) Smartphone
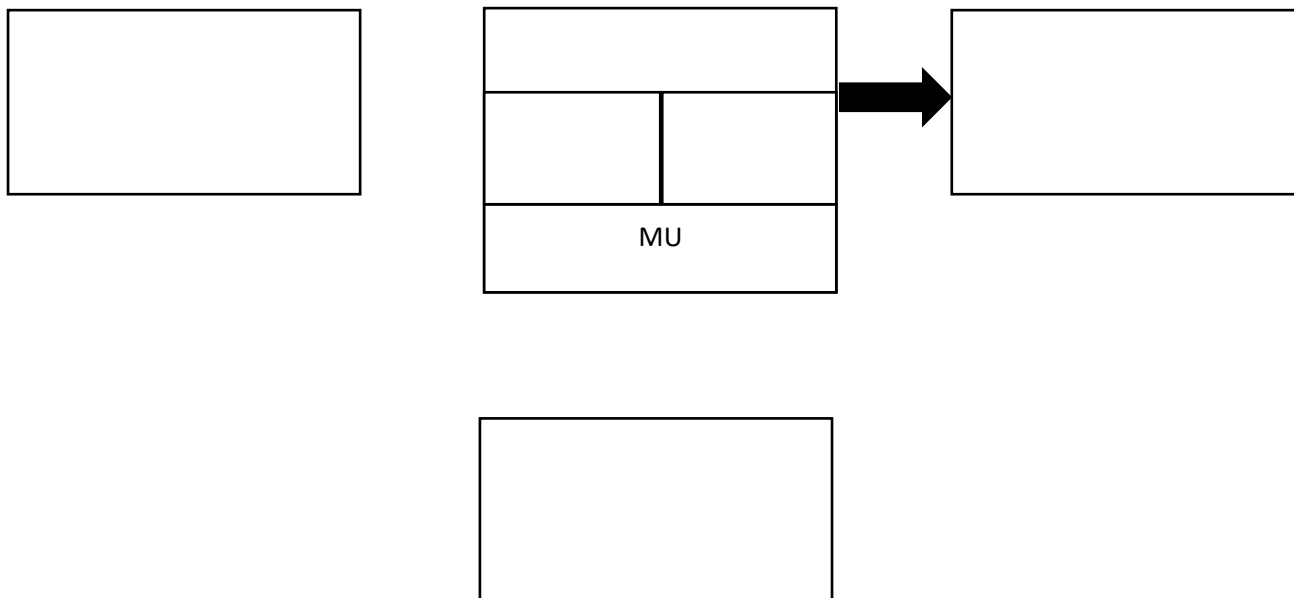
     i. Use 1:

_____ (1)

    ii. Use 2:

_____ (1)

   iii. Use 3:

_____ (1)

Question 2   **K3 (9 marks)**

Complete the following data flow diagram, including arrrows in order to, help BestBooks Ltd better understand computer systems.

Question 3   **C1 (10 marks)**

The CEO would like to have two Windows systems; a Desktop computer in the store for everyday tasks and a very small, portable one to take home when necessary. Help the CEO pick the computers with the best price to performance ratio from the ones listed below:

Part A: Desktop PC

Name	Gaming Desktop G55i	Aspire XC-780	iMac MK442B/A
CPU	Core i7-7700U	Core i3-7100	Core i5
CPU speed	3.6GHz	3.9GHz	2.8GHz
RAM	8 GB DDR4	8GB DDR4	8GB DDR4
HDD	1TB	1TB	1TB HD
Graphics Card	GTX1070 8GB	Intel HD Graphics 620	Intel Iris Pro Graphics 6200
OS	Windows 10	Windows 10	OS X
Price	**€1296.00**	**€495.00**	**€1545.00**

a) Which desktop system would be the most suitable? Write the exact name below.

_____ (2)

This question continues on next page.

b) Give **THREE** reasons for your choice:

i. _____

_____

_____ (1)

ii. _____

_____

_____ (1)

iii. _____

_____

_____ (1)

Part B: Laptop

Name	Acer CB3-131	Aspire 3 A315	Acer Spin SP111-31	Macbook MNYF2B/A
CPU	Intel Celeron N2490	Intel Celeron N3350	Intel Celeron N3350	Intel Core M3
CPU Speed	1.83GHz	1.1GHz	1.1GHz	1.2GHz
RAM	4GB DDR3L	4GB DDR3L	4GB DDR3	8GB DDR3
HDD	32GB	500GB	250GB	256GB SSD
Size	11.6"	15.6"	11.6"	12"
OS	Chrome OS	Windows 10	Windows 10	OSX
Price	**€325.00**	**€599.00**	**€419.00**	**€1579.00**

c) Which laptop system would be the most suitable? Write the exact name below.

_____ (2)

d) Give **THREE** reasons for your choice:

i. _____

_____

_____ (1)

ii. _____

_____

_____ (1)

iii. _____

_____

_____ (1)

Question 4   C2 (8 marks)

Provide **TWO** practical examples for each component to help the CEO better understand how each of the following components can affect the computer's performance.

a) SSD:

_____

_____

_____ (2)

b) RAM:

_____

_____

_____ (2)

c) CPU:

_____

_____

_____ (2)

d) Graphics Card:

_____

_____

_____ (2)

Please turn the page.

Question 5   K6 (9 marks)

The CEO would like to have access to the Internet in the bookstore and has asked you to give a short description of certain networking terms.

a) Modem:

_____

_____ (1.5)

b) Broadband:

_____

_____ (1.5)

c) Ethernet cable:

_____

_____ (1.5)

d) Bandwidth:

_____

_____ (1.5)

e) Switch:

_____

_____ (1.5)

f) Peer to Peer:

_____

_____ (1.5)

Question 6   **C3 (5 marks)**

You have set up the Desktop PC on the counter in the store next to the router, while the laptop was set up in the CEO's office at the back of the store.

a) What would be the best way to connect the desktop PC to the network?

_____ (1)

b) Provide **ONE** reason for your answer.

_____

_____ (1)

c) What would be the best way to connect the laptop to the network?

_____ (1)

d) Provide **ONE** reason for your answer.

_____

_____ (1)

e) You have noticed that the WiFi signal is quite weak in the office. Which device can be used to strengthen the WiFi signal?

_____ (1)

Question 7   **A1 (14 marks)**

The store clerk needs to change her operating system to Windows 7.

a) Before you start the OS installation you decide to backup the clerk's current system. Why is it important to create a backup at this stage?
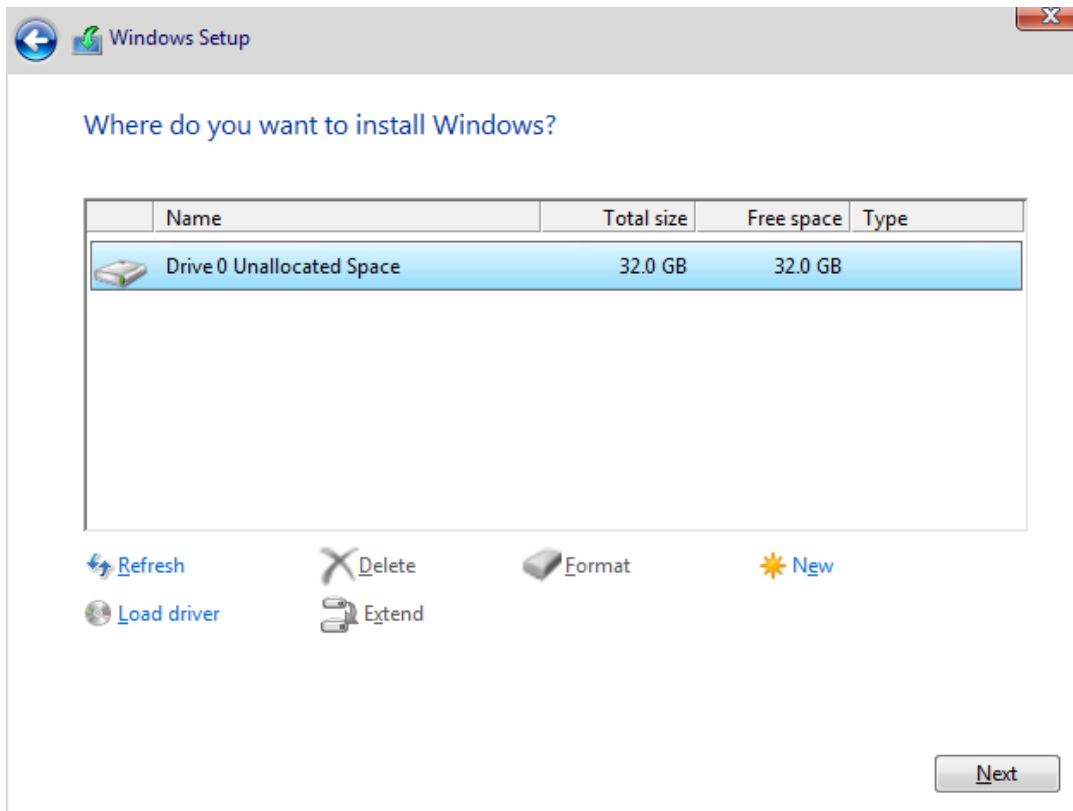
_____

_____ (1)

b) The clerk has heard the word "partition" but is not sure what it means. Provide a brief explanation.
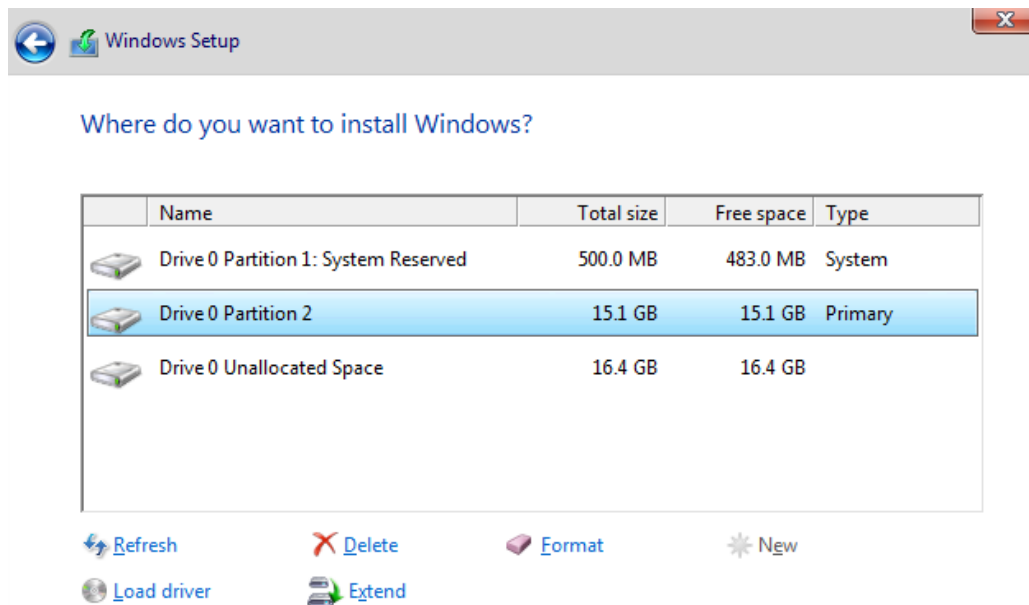
Partition:

_____

_____ (1)

This question continues on next page.

c) After your explanation, the clerk has decided to divide the hard disk into two partitions. On the image below, **CIRCLE** the option that would allow you to create a partition. (1)
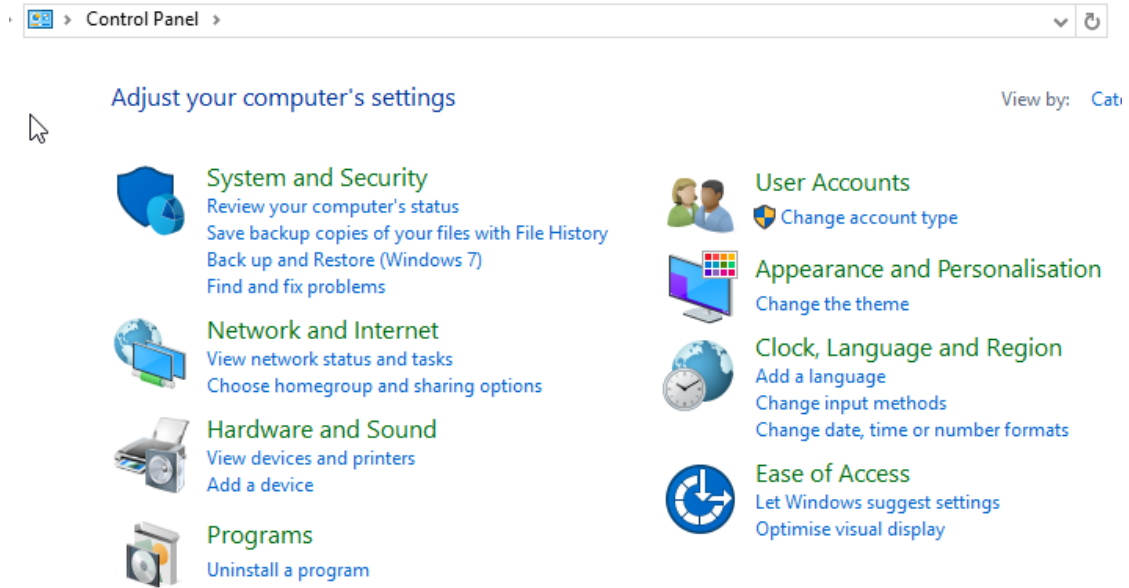

d) Look at the image below, how many partitions are there? _____ (1)

SEC39/s1.20s

e) You decide to format each of the partitions created. What does formatting do?

_____

_____ (1)

f) Now that the Windows 7 installation is complete, the clerk has asked you to customize certain aspects of the OS.

i. Which option from the Control Panel would allow you to create a new user account?

_____ (1)

ii. Which option from the Control Panel would allow you access to the settings to change the Desktop background image?

_____ (1)

iii. Which option from the Control Panel would allow you to change the accessibility settings?

_____ (1)

iv. Which option from the Control Panel would allow you to add a new language to your keyboard?

_____ (1)

This question continues on next page.

g) The clerk has always had some difficulty with seeing the screen properly and would like you to set it in such a way that both the **TEXT** and the **MOUSE CURSOR** are much larger than usual:

Explore all settings
When you select these settings, they will automatically start each time you sign in.

Use the computer without a display
Optimise for blindness

Make the computer easier to see
Optimise visual display

Use the computer without a mouse or keyboard
Set up alternative input devices

Make the mouse easier to use
Adjust settings for the mouse or other pointing devices

Make the keyboard easier to use
Adjust settings for the keyboard

Use text or visual alternatives for sounds
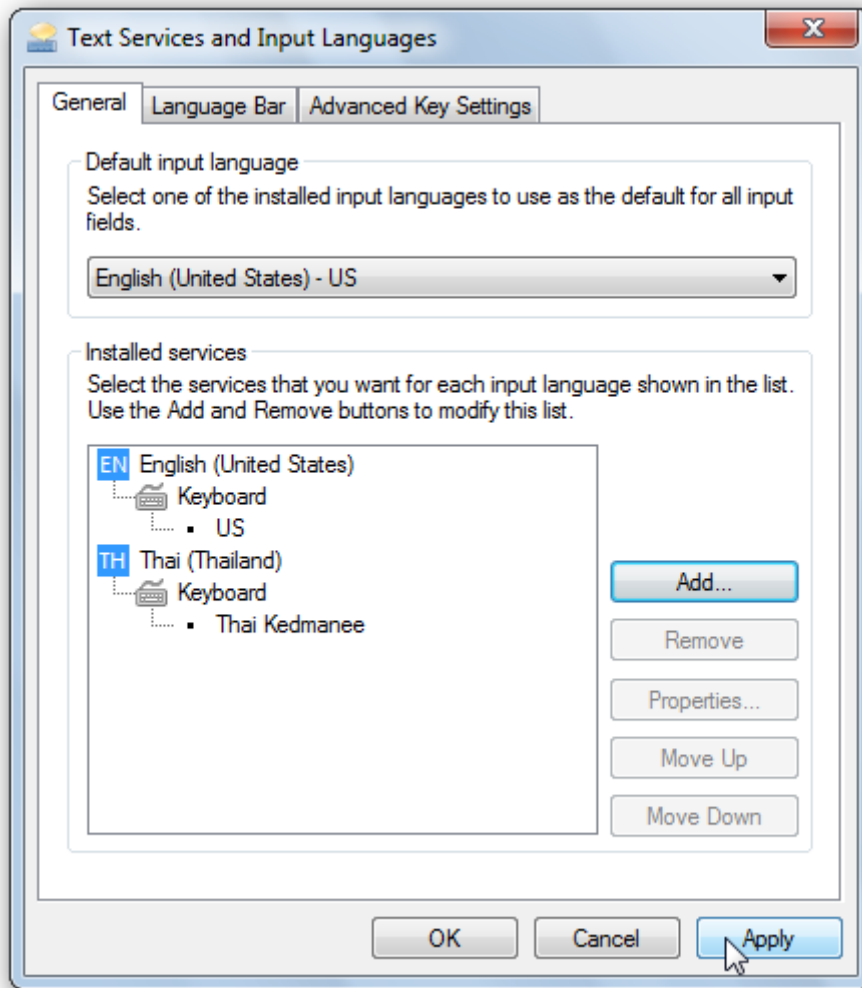Set up alternatives for sounds

i.   Where would you need to go to make the TEXT larger?

_____ (1)

ii.   Where would you need to go to make the MOUSE CURSOR larger?

_____ (1)

h) Look at the image below:

i. How many keyboard languages are installed on the computer?

_____ (1)

ii. List the steps you would need to follow to remove the Thai (Thailand) language.

_____

_____

_____

_____ (2)

Please turn the page.

Question 8   **C4 (7 marks)**

The new cashier at the bookstore needs to have access to the computer in the store.

a) The CEO does not want the cashier to be able to access all the information on the computer. As such you decide to set up a number of accounts.

    i.   Describe the term limited user account.

_____

_____

_____ (2)

    ii.   What user group should the CEO be in?

_____ (1)

    iii. What user group should the cashier be in?

_____ (1)

    iv. Mention **ONE** thing that the CEO would be able to do with his account that the cashier would not.

_____ (1)

b) The CEO understands that there will be files which the cashier would need to have access to. Which file sharing permissions would be required in the following situations?

    i.   A file which the cashier is able to open but not modify.

_____ (1)

    ii.   A file which the cashier is able to open and modify.

_____ (1)

Question 9   **A2 (16 marks)**

The CEO has asked you to explain how to share a folder with another user.

a) List down the steps needed to share a folder:

_____

_____

_____

_____

_____

_____ (6)

b) There is going to be one printer in the office which can be used by both computers in the store. Place the steps to enable printer sharing in the correct order. The first one has been done for you.   (7)

	Right click on the printer to be shared
	Click OK
	Choose Printer Properties
	Go to the Sharing Tab
	Go to Hardware and Sound
	Select the 'Share this printer' checkbox
1	Open the Control Panel
	Go to Devices and Printers

c) Once a printer has been shared, anyone who would like to use the printer would need to do one additional step. What would they need to do?

_____

_____

_____ (3)

Please turn the page.

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Question 10   **K9 (8 marks)**

In order to provide security on the network you have set up a firewall, however the CEO does not understand why it was necessary.

a) Outline **FOUR** roles of a firewall.

    i. Role 1:

        _____

        _____ (2)

    ii. Role 2:

        _____

        _____ (2)

    iii. Role 3:

        _____

        _____ (2)

    iv. Role 4:

        _____

        _____ (2)

Question 11   **K10 (8 marks)**

Apart from a firewall there are other security options that can be used to protect the computer from malware. Outline the purpose of each of the following security options:

a) Anti-Malware

_____

_____ (2)

b) Security Updates

_____

_____ (2)

c) Disk freezing

_____

_____ (2)

d) Adware Filtering

_____

_____ (2)

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