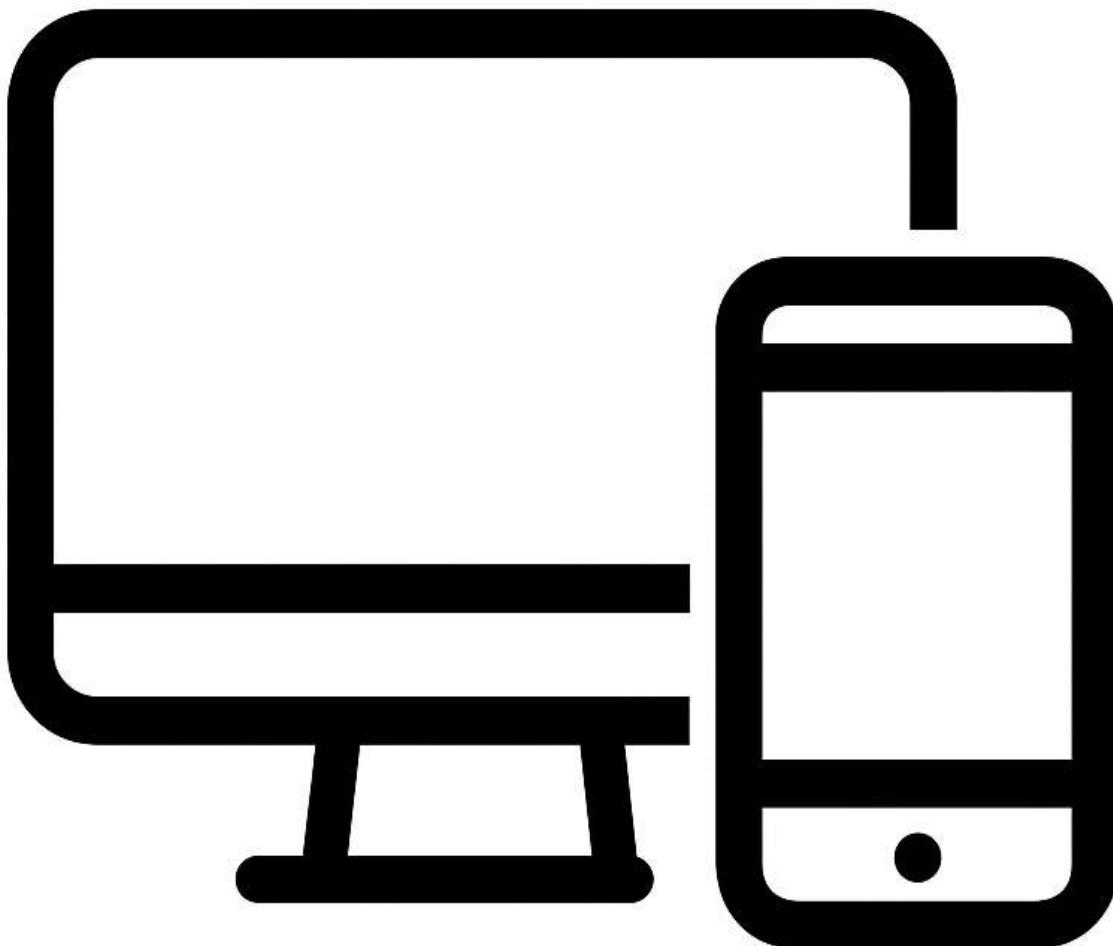


# **0417 IGCSE ICT THEORY**

## **Mini-drill and Questions**

## **Assessment Test Prep**



**Prepared by:**  
**The ReviseRoom Educator Team**

1 Circle **two** input devices.

Actuator

Blu-ray disc

Cloud

Keyboard

Flash  
memory

Hard disk

Mouse

SD card

2 A computer system uses applications software and system software.

(a) Describe the following software.

(i) Spreadsheet

.....  
.....  
.....  
.....

[2]

(ii) Database

.....  
.....  
.....  
.....

[2]

(iii) Applet

.....  
.....  
.....  
.....

[2]

(b) State **three** types of system software.

- 1.....
- 2.....
- 3.....

[3]

1 A computer consists of both hardware and software.

(a) Define the term hardware.

.....  
.....

[1]

(b) Give **two** examples of internal hardware devices.

1 .....  
2 .....

[2]

(c) Define the term software.

.....  
.....

[1]

(d) There are two types of software: system and applications.

Give **two** examples of applications software.

1 .....

.....  
.....  
.....  
.....

2 .....

.....  
.....  
.....  
.....

[2]

3 Describe **two** advantages of using a tablet computer rather than a laptop computer.

1 .....

.....  
.....  
.....  
.....

2 .....

.....  
.....  
.....  
.....

[2]

- 1 Tick (✓) whether the following statements refer to **Backing storage**, **RAM** or **ROM**.

	Backing storage (✓)	RAM (✓)	ROM (✓)
This is temporary storage used for the application being executed.			
This is volatile memory.			
An example of this storage is an SSD.			
This stores the start-up instructions for the computer.			

[4]

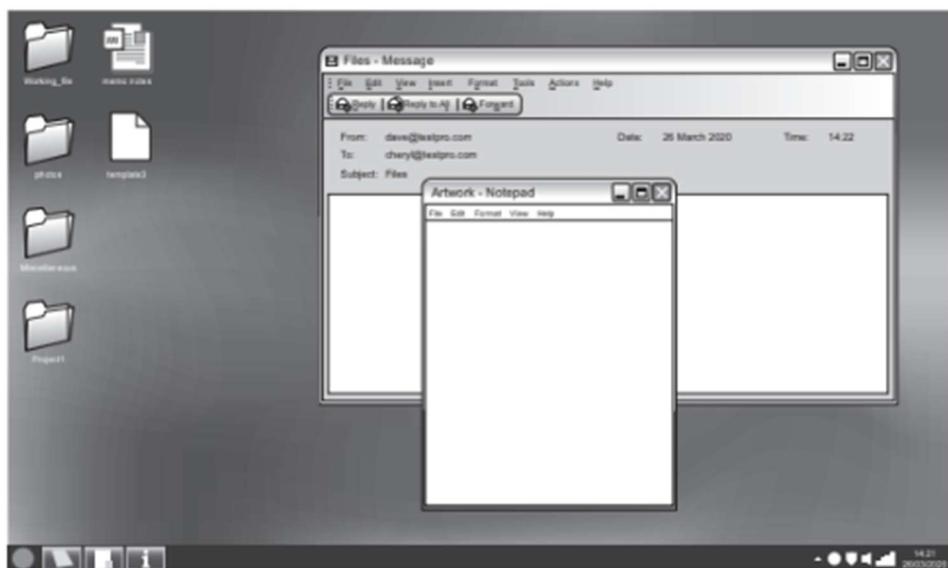
**1** There are two types of software: applications and system.

Tick () the most appropriate type of software for each of the following.

	Applications ( <input checked="" type="checkbox"/> )	System ( <input checked="" type="checkbox"/> )
Device driver		
Linker		
Photo-editing software		
Spreadsheet		

[2]

**2 (a)** Write down the type of interface shown.



[1]

(b) Write down **two** advantages of using this type of interface.

1.....

.....

2.....

.....

[2]

1 A computer consists of both hardware and software.

(a) Define the term software.

.....  
.....  
.....  
.....

[2]

(b) There are two types of software.

Identify the types.

1.....  
.....  
2.....  
.....

[2]

2 Tick (✓) whether the following statements refer to a Command Line Interface (CLI) or a Graphical User Interface (GUI).

	<b>CLI (✓)</b>	<b>GUI (✓)</b>
The user has to type in every instruction		
The user does not need to learn any of the instructions		
Each instruction has to be typed in correctly		
The user is in direct communication with the computer		

- 3** Every computer contains input and output devices and a central processing unit (CPU).

(a) Describe the CPU including its role.

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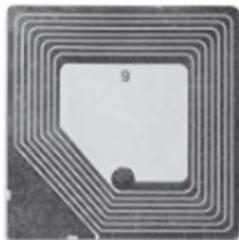
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[4]

**(b)** Data can be read directly by using a number of different devices.

Name the most appropriate device used to read the following data.



**05482 55448 654478 25447**

A standard linear barcode is located in the top right corner of the page. It consists of vertical black bars of varying widths on a white background, enclosed within a thin black rectangular border.



[4]

1 A computer consists of hardware and software.

(a) State what is meant by hardware.

.....  
.....

[1]

(b) State what is meant by software.

.....  
.....

[1]

(c) There are two types of software.

Name **one** of the two types of software used by a computer.

.....  
.....

[1]

(d) Name the piece of hardware found in a tablet computer that is both an input and output device.

.....  
.....

[1]

2 There are many types of data storage.

Tick whether the following statements are examples of read-only memory (**ROM**), random access memory (**RAM**) or a hard disk drive (**HDD**).

	ROM (✓)	RAM (✓)	HDD (✓)
It loses its data when the computer is switched off.			
It is classed as backing storage.			
It stores the start-up instructions of the computer.			
It temporarily stores the current work of the current user.			

[4]

3 Circle **two** items which are used for direct data entry.

Keyboard

MICR

Microphone

Mouse

Printer

RFID

[2]

9 Point of sale (POS) terminals are used in supermarkets.

- (a) Tick (✓) which of the following devices used at a POS terminal are only input devices, which are only output devices and which are both.

Device	Input (✓)	Output (✓)	Both (✓)
Bar code reader			
Buzzer			
Touch screen on till			
Receipt printer			
Light sensor on the conveyor belt			
Electronic scales			

[6]

- 12** The way we buy products using credit cards has changed in recent years. Originally the magnetic stripe on the back of the card was used with a signature. Then chip and PIN methods were used, and more recently contactless methods have been introduced.

Discuss the effectiveness of using these different methods to improve security when paying for goods.

[8]

7 Complete each sentence using the most appropriate output device from the following list.

3D printer

Buzzer

Dot matrix printer

Heater

Laser printer

LCD monitor

Light

Wide format printer

- (a) The device that can produce prosthetic limbs is called a

..... [1]

- (b) The device that can output soft copy is called a

..... [1]

- (c) The device that can produce sound as its main output is called a

..... [1]

2 Tick whether the following statements are **true or false**.

	true (✓)	false (✗)
An actuator is an item of software.		
Hardware is the physical components of a computer system.		
Software controls the operation of the computer.		
A spreadsheet is an example of systems software.		

[2]

- 1** Using the list, write down the most appropriate output device to produce the following.

3D printer	dot matrix printer	graph plotter	keyboard
monitor	mouse	speaker	SSD

- (a) High resolution drawings in hard copy.

..... [1]

- (b) Sound from a computer.

..... [1]

- (c) A solid object.

..... [1]

- (d) Scenes from a video game.

..... [1]

- 1** Direct data entry is one method of entering data into a computer.

For each statement in the table below, write down the most appropriate input device from the list.

Bar code reader	Chip reader	Keyboard	Magnetic stripe reader	MICR
Microphone	Mouse	PIN pad	RFID reader	Temperature sensor

Statement	Input device
The device used to input the account number printed at the bottom of a cheque	
The device used to input the four-digit code when a debit card is used	
The device used to input the data made up of black lines and spaces on household goods	
The device used to input the data from a contactless credit card	

[4]

9 Point of sale (POS) terminals are used in supermarkets.

(a) Tick (✓) which of the following devices used at a POS terminal are only input devices, which are only output devices and which are both.

Device	Input (✓)	Output (✓)	Both (✓)
Bar code reader			
Buzzer			
Touch screen on till			
Receipt printer			
Light sensor on the conveyor belt			
Electronic scales			

[6]

Question	Answer	Marks
1	Keyboard Mouse	2

Question	Answer	Marks
2(a)(i)	A computer program Data is arranged / stored / organised in rows and columns	2
2(a)(ii)	<b>Two</b> from: A computer program Collection of structured / organised data It manages / stores data in a fields / records / files / tables	2
2(a)(iii)	A small computer program Performs specific task within a larger application	2
2(b)	<b>Three</b> from: Compilers Linkers Device drivers Operating systems Utilities	3

Question	Answer	Marks
1(a)	The physical components of the computer	1
1(b)	<b>Two</b> from:  Processor Motherboard Video/graphic card Sound card	2
1(c)	<b>One</b> from:  Programs for controlling the operation of a computer Programs for processing of electronic data Program/data/applications	1
1(d)	<b>Two</b> from for example:  Word processing Spreadsheet Database Presentation	2

Question	Answer	Marks
3	<p><b>Two from:</b></p> <p>Tends to be faster to load up the operating system      They are more lightweight so can be carried anywhere//More portable      Don't generate as much heat      Lower power consumption therefore batteries last longer</p>	2

Question	Answer	Marks																				
1	<table border="1"> <tr> <td></td> <td>Backing storage</td> <td>RAM</td> <td>ROM</td> </tr> <tr> <td>This is temporary storage used for the application being executed.</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>This is volatile memory.</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>An example of this storage is an SSD.</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>This stores the startup instructions for the computer.</td> <td></td> <td></td> <td>✓</td> </tr> </table>		Backing storage	RAM	ROM	This is temporary storage used for the application being executed.		✓		This is volatile memory.		✓		An example of this storage is an SSD.	✓			This stores the startup instructions for the computer.			✓	4
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Question	Answer	Marks															
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	Applications	System															
Device driver		✓															
Linker		✓															
Photo-editing software	✓																
Spreadsheet	✓																

Question	Answer	Marks
2(a)	Graphical User Interface	1
2(b)	<p><b>Two from:</b></p> <p>User does not need to learn the commands      User-friendly      Can locate applications more rapidly</p>	2

Question	Answer	Marks
1(a)	Physical components of a computer system	1
1(b)	<b>One from:</b>  Programs for controlling the operation of a computer Programs for processing of data	1
1(c)	<b>One from:</b>  System Applications	1
1(d)	Touchscreen	1

Question	Answer	Marks																				
2	<table border="1"> <thead> <tr> <th></th> <th>ROM</th> <th>RAM</th> <th>HDD</th> </tr> </thead> <tbody> <tr> <td>It loses its data when the computer is switched off.</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>It is classed as backing storage.</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>It stores the start-up instructions of the computer.</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>It temporarily stores the current work of the current user.</td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table>		ROM	RAM	HDD	It loses its data when the computer is switched off.		✓		It is classed as backing storage.			✓	It stores the start-up instructions of the computer.	✓			It temporarily stores the current work of the current user.		✓		4
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It temporarily stores the current work of the current user.		✓																				

Question	Answer	Marks
3	RFID MICR	2

Question	Answer				Marks
	Device	Input	Output	Both	
9(a)	Bar code reader	✓			6
	Buzzer		✓		
	Touch screen on till			✓	
	Receipt printer		✓		
	Light sensor on the conveyor belt	✓			
	Electronic scales	✓			
	One mark per correct row				

Question	Answer	Marks
12	<p><b>Magnetic stripe</b>  <i>Benefits</i>          The user needs to have the card present to use it          Data more difficult to copy as it uses a stripe          Increased security as signature is also needed  <i>Drawbacks</i>          The card could be stolen and the signature copied          Magnetic stripe can be affected by magnetic fields          Card can be damaged due to overuse</p> <p><b>Chip and PIN</b>  <i>Benefits</i>          Increased security as the card and a PIN is also needed          The chip cannot be scanned remotely  <i>Drawbacks</i>          Shoulder surfing can take place          Security risk as the chip contains personal information          Card can be damaged due to overuse</p> <p><b>Contactless</b>  <i>Benefits</i>          More secure as encryption is used to read the card          Card details can be stored on a smartphone which might have an extra layer of security          Stops shoulder surfing          Only allows a small amount to be transacted  <i>Drawbacks</i>          Someone who steals the card can use it without a PIN          Can be cloned using electronic devices          No contact with the device so other devices may 'read' the card accidentally          Security risk as the card contains personal information</p> <p>To achieve full marks all three methods must be discussed, the discussion must also cover both the benefits and drawbacks.</p> <p>One mark can be awarded for a reasoned conclusion</p>	8

Question	Answer	Marks
7(a)	3D printer	1
7(b)	LCD Monitor	1
7(c)	Buzzer	1

Question	Answer	Marks												
2	<table border="1"> <tr> <td>An actuator is an item of software.</td> <td>true (✓)</td> <td>false (✓)</td> </tr> <tr> <td>Hardware is the physical components of a computer system.</td> <td>✓</td> <td></td> </tr> <tr> <td>Software controls the operation of the computer.</td> <td>✓</td> <td></td> </tr> <tr> <td>Spreadsheet is an example of systems software.</td> <td></td> <td>✓</td> </tr> </table> <p>2 marks for 4 correct ticks 1 mark for 3 or 2 correct ticks 0 marks for 1 or 0 correct ticks</p>	An actuator is an item of software.	true (✓)	false (✓)	Hardware is the physical components of a computer system.	✓		Software controls the operation of the computer.	✓		Spreadsheet is an example of systems software.		✓	2
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Spreadsheet is an example of systems software.		✓												

Question	Answer	Marks
1(a)	graph plotter	1
1(b)	speaker	1
1(c)	3D printer	1
1(d)	monitor	1

Question	Answer	Marks
1(i)	MICR	1
1(ii)	PIN pad	1
1(iii)	Bar code reader	1
1(iv)	RFID reader	1

Question	Answer	Marks																												
9(a)	<table border="1"> <thead> <tr> <th>Device</th> <th>Input</th> <th>Output</th> <th>Both</th> </tr> </thead> <tbody> <tr> <td>Bar code reader</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Buzzer</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>Touch screen on till</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>Receipt printer</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>Light sensor on the conveyor belt</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Electronic scales</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table> <p>One mark per correct row</p>	Device	Input	Output	Both	Bar code reader	✓			Buzzer		✓		Touch screen on till			✓	Receipt printer		✓		Light sensor on the conveyor belt	✓			Electronic scales	✓			6
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