

ICT

0417 Paper 1
2017 — 2023

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ICT 0417

TOPICAL PAST PAPER WORKSHEETS

2017 - 2023 | Questions + Mark scheme

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1 - (0417/11_Summer_2017_Q1) - Types And Components Of Computer Systems, Input And Output Devices, Storage Devices And Media

Complete the following sentences using the most appropriate words from the list below.

hard disk drive	hardware	microphone	OCR	printer
scanner	screen	software	speaker	virus

- (a) The physical components of a computer are called..... [1]
- (b) The programs and data of a computer are called..... [1]
- (c) The device used to input sound is called a..... [1]
- (d) The device used to store data is called a..... [1]

2 - (0417/13_Summer_2017_Q2) - Types And Components Of Computer Systems

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]

3 - (0417/12_Summer_2017_Q5) - Types And Components Of Computer Systems, Ict Applications

The managers of a nuclear power plant need to check the radioactivity levels in a chimney stack which needs to be demolished. They intend to use a robot. This device has sensors to read the radioactivity levels.

- (a) Explain why the data from the sensors cannot be read directly by the microprocessor and name the device needed to change the data into a form that the microprocessor can understand.

.....

.....

.....

.....

.....

..... [3]

- (b) The managers have been told they can use this robot for other tasks by replacing the existing sensors with different ones.

Give **three** advantages of using an existing robot device rather than developing a new one.

.....

.....

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.....

.....

..... [3]

4 - (0417/11_Summer_2017_Q8) - Types And Components Of Computer Systems, Ict Applications

A company is setting up a video-conference.

(a) Name **three** computer hardware devices they would need.

1.....

.....

2.....

.....

3.....

.....

[3]

(b) The company could have set up a web-conference rather than a video-conference.

Describe what is meant by a web-conference.

.....

.....

.....

.....

.....

.....

.....

.....

[4]

5 - (0417/12_Summer_2017_Q8) - Types And Components Of Computer Systems, The Effects Of Using It

Expert systems are used in medical applications.

(a) From the list below, tick **two** components of an expert system.

	tick (✓)
Control unit	
Graphics program	
Inference engine	
RFID	
Rules base	
Search engine	

[2]

(b) Describe **three** benefits of the doctor using an expert system to help diagnose a patient's illness.

.....

.....

.....

.....

.....

.....

.....

.....

[3]

6 - (0417/11_Summer_2017_Q10) - *The Effects Of Using It, Ict Applications, Types And Components Of Computer Systems*

The city of Venice is in danger of being damaged due to rising sea levels. A new computer controlled flood defence system is being planned. The developers of the system are using a spreadsheet to model the plan.

(a) Give **three** reasons why computer models are used to simulate the flood defence system.

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

[3]

(b) The city uses a manual system for detecting flood waters. This relies on people watching for the rising levels of water.

Explain why creating a computerised system is better than using the manual system.

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

[4]

- (c) The developers have used the results from the model to choose a computer controlled flood defence system. It will have a barrier which can open or close.

Describe the role of the microprocessor in such a system.

.....

.....

.....

.....

.....

.....

.....

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.....

.....

[5]

7 - (0417/11_Summer_2017_Q14) - Types And Components Of Computer Systems

Computer operating systems have developed since early computers used Command Line Interfaces (CLI). Many computers now use Graphical User Interfaces (GUI), some of which are capable of using touch screen technology.

Compare and contrast CLI and GUI.

[8]

8 - (0417/13_Winter_2017_Q2) - Types And Components Of Computer Systems

Tick whether the following are examples of **application** or **system** software.

	application (✓)	system (✓)
Linker		
Database management systems		
Photo-editing software		
Compiler		

[2]

9 - (0417/11_Winter_2017_Q5) - Storage Devices And Media, Types And Components Of Computer Systems

Laptop computers are often equipped with Solid State Drives (SSD) or Hard Disk Drives (HDD).

(a) Give **four** advantages of SSD compared to HDD.

- 1
-
- 2
-
- 3
-
- 4
-

[4]

(b) People now tend to buy laptops rather than desktop computers. Despite this, desktop computers are still fairly popular.

Describe **three** advantages of using a desktop computer rather than a laptop computer.

- 1
-
- 2
-
- 3
-

[3]

11 - (0417/12_Summer_2018_Q1) - Types And Components Of Computer Systems

A computer contains internal hardware.

Write down the most appropriate item of internal hardware to match the descriptions.

(a) This handles all the system instructions.

..... [1]

(b) A printed circuit board that contains the main components of the computer.

..... [1]

(c) This generates output to the speaker.

..... [1]

(d) A type of memory where data is lost when the computer is switched off.

..... [1]

12 - (0417/13_Summer_2018_Q1) - *Storage Devices And Media, Types And Components Of Computer Systems*

A computer contains internal hardware.

Write down the item of internal hardware from the list to match the descriptions.

CD ROM	Internal hard disk	Network card	RAM	ROM
Sound card	Touch screen	Trackerball	Video card	Wide format printer

(a) Stores the start-up instructions for the computer.

..... [1]

(b) A magnetic medium that stores applications when they are not in use.

..... [1]

(c) Memory where data is lost when the computer is turned off.

..... [1]

(d) Generates images to display on the monitor.

..... [1]

13 - (0417/13_Summer_2018_Q2) - *Types And Components Of Computer Systems*

For each application tick the most appropriate type of computer to match the description.

	Desktop (✓)	Laptop (✓)	Smartphone (✓)
A computer that is only used in one place.			
Must always be connected to an external power source to work.			
Small enough to fit into a pocket.			
A mobile device with a large keyboard and display.			

[4]

14 - (0417/11_Summer_2018_Q14) - Types And Components Of Computer Systems

Many computer systems use virtual reality.

(a) Explain what is meant by virtual reality.

.....

.....

.....

..... [2]

(b) Name **two** pieces of hardware used in virtual reality systems.

1.....

2.....

[2]

15 - (0417/11_Winter_2018_Q1) - Types And Components Of Computer Systems

There are many types of input device. Complete the following sentences, using the most appropriate item from the list below.

barcode reader	chip reader	graphics tablet	keyboard	microphone
mouse	numeric keypad	scanner	sensor	touch pad

(a) A device used to input sound is called a

..... [1]

(b) A device used to enter a four-digit code when paying by debit card in a shop is called a

..... [1]

(c) A pointing device commonly built into a laptop is called a

..... [1]

(d) A device, used by designers and artists, which has a stylus for drawing applications is called a

..... [1]

16 - (0417/12_Winter_2018_Q1) - Types And Components Of Computer Systems

Tick whether the following are examples of **applications software** or **system software**.

	applications software (✓)	system software (✓)
Control software		
Compiler		
Word processing		
Device drivers		

[2]

17 - (0417/13_Winter_2018_Q1) - Types And Components Of Computer Systems, Input And Output Devices

Complete the following sentences, using items from the list.

3D printer backing storage CPU hardware RAM
ROM scanner software touchscreen wide format printer

- (a) The core component in a computer that controls arithmetic operations is called a
..... [1]
- (b) The physical components of a computer are collectively called
..... [1]
- (c) The type of memory that is volatile is called
..... [1]
- (d) An output device that is also an input device is called a
..... [1]

18 - (0417/13_Winter_2018_Q12) - Types And Components Of Computer Systems

A Command Line Interface (CLI) is found in a computer system.

Describe the drawbacks of using a CLI.

.....

.....

.....

.....

.....

..... [3]

19 - (0417/12_Summer_2019_Q1) - Types And Components Of Computer Systems, Input And Output Devices

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]

20 - (0417/13_Summer_2019_Q2) - Types And Components Of Computer Systems

Tick the most appropriate type of computer that matches each description.

	Desktop (✓)	Laptop (✓)	Smartphone (✓)
A portable computer that would most easily fit into your pocket			
A computer that is not powered by batteries			
A computer that has the smallest screen			
A portable computer with a keyboard and with a built-in 15 inch monitor			

[4]

21 - (0417/11_Summer_2019_Q3) - Types And Components Of Computer Systems

Circle **two** items which are used as internal hardware devices.

Keyboard

Linker

Mouse

Printer

Processor

Sound card

[2]

22 - (0417/13_Summer_2019_Q4) - Types And Components Of Computer Systems

Truck repair shops tend to use dot matrix printers to produce their invoices.

Identify **two** advantages of using a dot matrix printer rather than a laser printer in this environment.

.....
.....
.....
..... [2]

23 - (0417/13_Summer_2019_Q5) - Types And Components Of Computer Systems

A computer contains system software and applications software.

(a) Explain what is meant by system software.

.....
..... [1]

(b) Explain what is meant by applications software.

.....
..... [1]

(c) Circle **two** types of system software.

Actuator	Linker	Operating system
Photo-editing software	Sensor	Spreadsheet

[2]

24 - (0417/11_Summer_2019_Q6) - Types And Components Of Computer Systems

IT technicians are setting up a new file server for a school.

Describe the benefits and drawbacks of using a command line interface (CLI) rather than a graphical user interface (GUI) to set up a new file server.

[6]

25 - (0417/11_Winter_2019_Q1) - Types And Components Of Computer Systems, Input And Output Devices

(a) Tick whether the following are examples of System software or Applications software.

	System (✓)	Applications (✓)
A linker		
A database		
An operating system		
An applet		

[2]

(b) Tick whether the following are examples of Internal hardware or External hardware.

	Internal (✓)	External (✓)
A monitor		
RAM		
Printer		
Mouse		

[2]

26 - (0417/13_Winter_2019_Q2) - Types And Components Of Computer Systems

Tick whether the following are optical, magnetic or solid state storage media.

	optical (✓)	magnetic (✓)	solid state (✓)
Hard disk			
SD card			
CD ROM			
Memory stick			

[4]

27 - (0417/12_Winter_2019_Q3) - Types And Components Of Computer Systems, Input And Output Devices

Complete the following sentences, using the most appropriate items from the list.

An app	Coding	A data projector	A linker	Pen drive
Quantum cryptography	A TFT monitor	A touch screen	Vision enhancement	Web cam

- (a) is an example of system software.
- (b) is an example of an output device that can also act as an input device.
- (c) projects an image inside the headset of the user.
- (d) is a form of encryption of data.

[4]

28 - (0417/13_Winter_2019_Q3) - *Types And Components Of Computer Systems*

A smartphone has many uses, for example making and receiving telephone calls.

Give **four** other uses of a smartphone.

1

2

3

4

[4]

29 - (0417/11_Winter_2019_Q5) - *Types And Components Of Computer Systems*

People are buying smartphones rather than desktop computers.

Describe the differences between using a smartphone compared to a desktop computer.

.....

.....

.....

.....

.....

.....

.....

..... [4]

30 - (0417/12_Winter_2019_Q5) - *Types And Components Of Computer Systems*

People are buying laptop computers rather than desktop computers.

Give **four** advantages of using a laptop computer rather than a desktop computer.

- 1
- 2
- 3
- 4

[4]

31 - (0417/13_Winter_2019_Q9) - *Types And Components Of Computer Systems*

A restaurant keeps meals warm in an oven. The meals must be kept at a constant temperature. A temperature sensor is used to check the temperature in the oven.

Describe the use of a microprocessor to control the temperature in the oven.

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

32 - (0417/11_Summer_2020_Q1) - Types And Components Of Computer Systems

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]

33 - (0417/13_Summer_2020_Q1) - Types And Components Of Computer Systems

There are two types of software: applications and system.

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

	Applications (✓)	System (✓)
Device driver		
Linker		
Photo-editing software		
Spreadsheet		

[2]

34 - (0417/11_Summer_2020_Q2) - Types And Components Of Computer Systems

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

	CLI (✓)	GUI (✓)
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		

[2]

35 - (0417/12_Summer_2020_Q2) - Types And Components Of Computer Systems



Tawarasoft [Version 12.1.2/213.162]
(c) 2020 Tawarasoft Ltd. All rights reserved.
C:\users\Test >_

(a) Write down the type of interface shown.

..... [1]

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

1.....

.....

2.....

.....

[2]

36 - (0417/11_Summer_2020_Q3) - Types And Components Of Computer Systems, Input And Output Devices

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

(a) Describe the CPU including its role.

.....

.....

.....

.....

.....

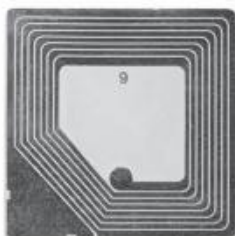
.....

.....

[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.



.....

Chip No.	Search Code	Account No.	Transaction Code
05482	55448	654478	25447

.....



.....



.....

[4]

37 - (0417/13_Summer_2020_Q5) - Types And Components Of Computer Systems

The use of laptop computers and tablet computers by people on the move is becoming very popular.

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

1

.....

2

.....

3

.....

4

.....

[4]

ANSWERS

1 - (0417/11_Summer_2017_Q1) - *Types And Components Of Computer Systems, Input And Output Devices, Storage Devices And Media*

(a)	Hardware	1
(b)	Software	1
(c)	Microphone	1
(d)	Hard disk drive	1

2 - (0417/13_Summer_2017_Q2) - *Types And Components Of Computer Systems*

	<table> <tr> <th></th><th>true (✓)</th><th>false (✓)</th></tr> <tr> <td>An actuator is an item of software.</td><td></td><td>✓</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> 2 marks for 4 correct ticks 1 mark for 3 or 2 correct ticks 0 marks for 1 or 0 correct ticks		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.	✓		Spreadsheet is an example of systems software.		✓	2
	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.	✓																
Spreadsheet is an example of systems software.		✓															

3 - (0417/12_Summer_2017_Q5) - *Types And Components Of Computer Systems, Ict Applications*

(a)	The sensor reads analogue data The microprocessor can only process digital data Analogue to Digital Converter is needed to convert the data	3
(b)	Any three from: - More likely to be reliable as it is known that the device will work - It is cheaper than paying full development costs - It is quicker to get into operation as the device has been built - Lower maintenance costs as faults will be known - Lower costs for training staff	3

4 - (0417/11_Summer_2017_Q8) - *Types And Components Of Computer Systems, Ict Applications*

(a)	Any three from: - Video/digital camera/webcam - Microphone - Keyboard - Large screen/monitor/data projector - Remote control - Speakers/headphones	3
(b)	Any four from: - A conference held over the internet using TCP/IP connections - Examples webinars/webcasts/VOIP - Can be point to point (VOIP) or multicast - Allows text communication - Allows voice communication - Allows video communication - Uses a web browser	4

5 - (0417/12_Summer_2017_Q8) - Types And Components Of Computer Systems, The Effects Of Using It

(a)	<table><tr><td></td><td>tick (✓)</td></tr><tr><td>Control unit</td><td></td></tr><tr><td>Graphics program</td><td></td></tr><tr><td>Inference engine</td><td>✓</td></tr><tr><td>RFID</td><td></td></tr><tr><td>Rules base</td><td>✓</td></tr><tr><td>Search engine</td><td></td></tr></table>		tick (✓)	Control unit		Graphics program		Inference engine	✓	RFID		Rules base	✓	Search engine		2
	tick (✓)															
Control unit																
Graphics program																
Inference engine	✓															
RFID																
Rules base	✓															
Search engine																
(b)	Any three from: - An expert system may help the doctor make a more accurate diagnosis - An expert system uses data from many experts therefore it contains more knowledge than a single doctor - Cheaper than regularly re-training the doctor - The expert system's knowledge may be more up to date than the knowledge of a single doctor - Cheaper than employing many specialists - The diagnoses given are more consistent	3														

6 - (0417/11_Summer_2017_Q10) - The Effects Of Using It, Ict Applications, Types And Components Of Computer Systems

(a)	Any three from: - Cheaper than building the real thing - Quicker to see results rather than building it - Safer than building the real thing - Easier to change variables in the model/can use what ifs	3
(b)	Any four from: - The sensors are out in the bay therefore there is a faster response to floods - Safer as flood watchers are not put in danger from rising waters - Data collected is more accurate - The data readings can be taken more frequently - Data collection can be continuous - The town's people can be alerted faster of the danger - Predictions can be made from the data easily	4
(c)	Any five from: - The microprocessor reads the data from the sensor - The microprocessor has a set of pre-set values stored - The microprocessor compares the readings from the sensors with the pre-set values - If higher the microprocessor sends a signal... - ...to the actuator to close the barrier - If lower the microprocessor sends a signal... - ...to the actuator to open the barrier	5

7 - (0417/11_Summer_2017_Q14) - Types And Components Of Computer Systems

	To be marked as a level of response: Level 3 (7–8 marks): Candidates will give reasoned similarities and differences. There will be a reasoned conclusion. They will relate the answer to both CLI and GUI. The information will be relevant, clear, organised and presented in a structured and coherent format. Level 2 (4–6 marks): Candidates will expand on similarities/differences relating the answer to both GUI and CLI. Some of the points may be one sided. There may be a conclusion. For the most part, the information will be relevant and presented in a structured and coherent format. Level 1 (1–3 marks): Candidates only list a difference/similarity. Candidates only refer to GUI or CLI. Answers may be simplistic with little or no relevance. Level 0 (0 marks) Response with no valid content <i>Answers may make reference to, for example:</i> Post GUI allows the use of pinching, scrolling, expanding Post GUI allows the use of touch screen but a CLI does not allow for this Icons speed up finding instructions, CLI you have to type out the commands in full No editing in CLI If a mistake is made in CLI it could have major consequences whereas GUI has less impact Due to graphics GUI uses a lot of memory, CLI is a lot smaller program Loss of memory slows down the operations of the computer GUI cannot operate properly if memory is low The loss of memory affects kinds of applications that can be run GUI more user friendly CLI the commands have to be memorised GUI has a more varied use on other devices not just computers In a CLI several commands have to be typed in rather than one command in GUI CLI commands have to be typed in every time the same command is run GUI sometimes have CLI embedded within them CLI and GUI both carry out file management CLI and GUI use similar utilities Both are operating systems Both control the hardware and software	8
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8 - (0417/13_Winter_2017_Q2) - Types And Components Of Computer Systems

	<table> <tr> <th></th><th>application (✓)</th><th>system (✓)</th></tr> <tr> <td>Linker</td><td></td><td>✓</td></tr> <tr> <td>Database management systems</td><td>✓</td><td></td></tr> <tr> <td>Photo-editing software</td><td>✓</td><td></td></tr> <tr> <td>Compiler</td><td></td><td>✓</td></tr> </table> 4 correct answers - 2 marks 2 or 3 correct answers - 1 mark 0 or 1 correct answers - 0 marks		application (✓)	system (✓)	Linker		✓	Database management systems	✓		Photo-editing software	✓		Compiler		✓	2
	application (✓)	system (✓)															
Linker		✓															
Database management systems	✓																
Photo-editing software	✓																
Compiler		✓															

9 - (0417/11_Winter_2017_Q5) - Storage Devices And Media, Types And Components Of Computer Systems

(a)	Any four from: The SSD is lighter in weight than the HDD therefore the laptop will be lighter and more portable The speed of access in SSD is a lot quicker The speed of data transfer in SSD is a lot quicker There is less chance of the data becoming corrupted as it can save whilst the laptop is moving It is a smaller device therefore the laptop will be smaller/thinner SSD uses less energy Less chance of impact damage	4
(b)	Any three from: As the elements are separate units there is more choice of devices/can be replaced if fails Can be easier to upgrade Easier to reduce glare on screen as it is separate Laptop more expensive for same performance Lower chance of it being stolen/lost	3

10 - (0417/12_Winter_2017_Q14) - Types And Components Of Computer Systems, Ict Applications

(a)	Five from: The data from the sensor is compared to the pre-set value The pre-set value is set to show the minimum distance of the worker If the values are the same/lower... ...the microprocessor sends a signal... ...to the actuator to stop the motor/robot The microprocessor starts a timer After a short while the microprocessor restarts the robot The microprocessor stops the timer If the values are different/higher ...the microprocessor does nothing/robot keeps moving The process is continuous	5
(b)	Any three advantages: Overall wage bill is reduced as there are fewer workers Productivity is higher/the robot can work all day long therefore is more efficient It has a set path/route to follow which means that staff know when it is due GPS can be used to show where it is in the building Less expensive in the long run/doesn't get paid Less mistakes are made/more accurate Allow humans to do more <u>skilled</u> work Greater consistency Work 24/7/without breaks Any three disadvantages: The cost of buying/set up robot is expensive It can only carry out one task Stairs can be a problem Payload size can be an issue Expensive to maintain (only if Less expensive in the long run has not been given) Replace labour, leads to increased redundancy payments Maximum 4 marks.	4

11 - (0417/12_Summer_2018_Q1) - Types And Components Of Computer Systems

(a)	Processor / CPU	1
(b)	Motherboard	1
(c)	Sound card	1
(d)	RAM / Random Access Memory	1

12 - (0417/13_Summer_2018_Q1) - Storage Devices And Media, Types And Components Of Computer Systems

(a)	ROM	1
(b)	Internal hard disk	1
(c)	RAM	1
(d)	Video card	1

13 - (0417/13_Summer_2018_Q2) - Types And Components Of Computer Systems

		Desktop (✓)	Laptop (✓)	Smartphone (✓)	4
	A computer that is only used in one place.	✓			
	Must always be connected to an external power source to work.	✓			
	Small enough to fit into a pocket.			✓	
	A mobile device with a large keyboard and display.		✓		

14 - (0417/11_Summer_2018_Q14) - Types And Components Of Computer Systems

(a)	Two from: Three-dimensional, computer generated environment It can be explored and interacted with, by a person Can manipulate objects or perform a series of actions Replicates an environment Makes use of the sensory experience	2
(b)	Two from: Virtual reality headset / head mounted display / Virtual reality goggles Speakers / headphone The tactile glove Joystick / controllers / driving wheel	2

15 - (0417/11_Winter_2018_Q1) - Types And Components Of Computer Systems

(a)	Microphone	1
(b)	Numeric keypad	1
(c)	Touch pad	1
(d)	Graphics tablet	1

16 - (0417/12_Winter_2018_Q1) - Types And Components Of Computer Systems

		applications software (✓)	system software (✓)	2
	Control software	✓		
	Compiler		✓	
	Word processing	✓		
	Device drivers		✓	

2 marks for 4 correct ticks
1 mark for 2 or 3 correct ticks
0 marks for 0 or 1 tick

17 - (0417/13_Winter_2018_Q1) - Types And Components Of Computer Systems, Input And Output Devices

(a)	CPU	1
(b)	hardware	1
(c)	RAM	1
(d)	touch screen	1

18 - (0417/13_Winter_2018_Q12) - Types And Components Of Computer Systems

	Three from: Commands have to be learnt Commands have to be typed in which takes time The operator has to have specialist knowledge of the system Help facilities are basic Commands have to be precise	3
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19 - (0417/12_Summer_2019_Q1) - Types And Components Of Computer Systems, Input And Output Devices

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

20 - (0417/13_Summer_2019_Q2) - Types And Components Of Computer Systems

		Desktop	Laptop	Smartphone	4
	A portable computer that would most easily fit into your pocket			✓	
	A computer that is not powered by batteries	✓			
	A computer that has the smallest screen			✓	
	A portable computer with a keyboard and with a built-in 15 inch monitor		✓		

21 - (0417/11_Summer_2019_Q3) - Types And Components Of Computer Systems

	Sound card	1
	Processor	1

22 - (0417/13_Summer_2019_Q4) - Types And Components Of Computer Systems

	Two from: Noise of the printer will not be a distraction in a noisy environment The dot matrix is more resistant to an oily / dirty environment Don't have to fill the paper tray as often Uses multi-part stationery Can use carbonised paper	2
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23 - (0417/13_Summer_2019_Q5) - Types And Components Of Computer Systems

(a)	One from: Programs that control and manage the computer's hardware//it runs the applications software Interface between the computer hardware and the user applications	1
(b)	Programs that allow the user to carry out specific tasks	1
(c)	Linker Operating system	2

24 - (0417/11_Summer_2019_Q6) - Types And Components Of Computer Systems

Six from: Benefits The user is not restricted to the predetermined options//the GUI uses icons and set menus The user has more control over the computer settings//in GUI computer settings are protected from the user Uses less memory than GUI Requires less processing power for the interface More processing power is made available for the task Drawbacks The commands used have to be learnt The commands used have to be remembered The commands used have to be typed in/entered exactly Have to remember the exact path/correct name of application More prone to errors on data entry Commands have to be typed in//in a GUI can use touchscreens/mice Tends to be used by specialist people//GUI is more user-friendly and can be used by non-experts To gain full marks both benefits and drawbacks are required	6
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25 - (0417/11_Winter_2019_Q1) - Types And Components Of Computer Systems, Input And Output Devices

(a)	<table> <tr> <th></th><th>System (✓)</th><th>Applications (✓)</th></tr> <tr> <td>A linker</td><td>✓</td><td></td></tr> <tr> <td>A database</td><td></td><td>✓</td></tr> <tr> <td>An operating system</td><td>✓</td><td></td></tr> <tr> <td>An applet</td><td></td><td>✓</td></tr> </table> 4 correct ticks = Two marks 2 or 3 correct ticks = One mark 1 or 0 correct = Zero marks		System (✓)	Applications (✓)	A linker	✓		A database		✓	An operating system	✓		An applet		✓	2
	System (✓)	Applications (✓)															
A linker	✓																
A database		✓															
An operating system	✓																
An applet		✓															
(b)	<table> <tr> <th></th><th>Internal (✓)</th><th>External (✓)</th></tr> <tr> <td>A monitor</td><td></td><td>✓</td></tr> <tr> <td>RAM</td><td>✓</td><td></td></tr> <tr> <td>Printer</td><td></td><td>✓</td></tr> <tr> <td>Mouse</td><td></td><td>✓</td></tr> </table> 4 correct ticks = Two marks 2 or 3 correct ticks = One mark 1 or 0 correct = Zero marks		Internal (✓)	External (✓)	A monitor		✓	RAM	✓		Printer		✓	Mouse		✓	2
	Internal (✓)	External (✓)															
A monitor		✓															
RAM	✓																
Printer		✓															
Mouse		✓															

26 - (0417/13_Winter_2019_Q2) - Types And Components Of Computer Systems

	optical (✓)	magnetic (✓)	Solid state (✓)	4
Hard disk		✓		
SD card			✓	
CD ROM	✓			
Memory stick			✓	

27 - (0417/12_Winter_2019_Q3) - Types And Components Of Computer Systems, Input And Output Devices

(a)	A linker	1
(b)	A touch screen	1
(c)	Vision enhancement	1
(d)	Quantum cryptography	1

28 - (0417/13_Winter_2019_Q3) - Types And Components Of Computer Systems

Four from, for example: GPS/location services/sat nav Telephone banking Social networking Emails sending/receiving Streaming videos/music Making/receiving text messaging Taking photos Play music	4
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29 - (0417/11_Winter_2019_Q5) - Types And Components Of Computer Systems

Four from: Smartphones are <u>more</u> portable Smartphones are lighter in weight Desktops cannot be used on the move//desktops need surfaces to work on Smartphones have integral devices//desktops have separate keyboard/monitor Smartphones can use 3G/4G/5G communications link Smartphones are battery powered//Desktops require a <u>constant</u> power supply Desktop requires extra hardware/software Desktop computers have a larger screen Desktop computers have a larger keyboard Desktop the footprint is larger Desktops more powerful Smartphones have more chance of being damaged/stolen <u>as they are portable</u> Smartphones tend to use modified websites//desktop can access more websites	4
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30 - (0417/12_Winter_2019_Q5) - Types And Components Of Computer Systems

	Four from: A laptop is more portable A laptop is made in one unit whereas a desktop has several items of hardware therefore fewer items to lose The footprint of the laptop tends to be smaller Lower power consumption Uses battery power so can be used in more places	4
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31 - (0417/13_Winter_2019_Q9) - Types And Components Of Computer Systems

	Four from: Data from the temperature sensor is sent to the microprocessor The microprocessor has a stored/preset value Data from the temperature sensor is compared with the preset value If the reading is higher than the preset value... ...microprocessor sends signal... ...to the actuator to turn the oven off If the reading is lower than the preset value signal is sent to the oven to turn/keep it on Continual process	4
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32 - (0417/11_Summer_2020_Q1) - Types And Components Of Computer Systems

(a)	Two from: Software is programs and data Programs for controlling the operation of a computer Programs for processing of electronic data	2
(b)	System software Applications software	2

33 - (0417/13_Summer_2020_Q1) - Types And Components Of Computer Systems

	<table> <tr> <th></th><th>Applications</th><th>System</th></tr> <tr> <td>Device driver</td><td></td><td>✓</td></tr> <tr> <td>Linker</td><td></td><td>✓</td></tr> <tr> <td>Photo-editing software</td><td>✓</td><td></td></tr> <tr> <td>Spreadsheet</td><td>✓</td><td></td></tr> </table> Two marks for four correct ticks One mark for two or three correct ticks Zero marks for one correct tick		Applications	System	Device driver		✓	Linker		✓	Photo-editing software	✓		Spreadsheet	✓		2
	Applications	System															
Device driver		✓															
Linker		✓															
Photo-editing software	✓																
Spreadsheet	✓																

34 - (0417/11_Summer_2020_Q2) - Types And Components Of Computer Systems

		CLI	GUI	2
	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	✓		
	Two marks for four correct ticks One mark for two or three correct ticks Zero marks for one correct tick			

35 - (0417/12_Summer_2020_Q2) - Types And Components Of Computer Systems

(a)	Command Line Interface/CLI	1
(b)	Two from: Have to remember/learn the commands Have to type in the commands <u>accurately</u> Difficult to edit once commands typed in	2

36 - (0417/11_Summer_2020_Q3) - Types And Components Of Computer Systems, Input And Output Devices

(a)	Four from: An item of hardware It carries out the instructions of a computer program It performs basic arithmetic calculations It performs logical operations It performs input/output operations of the computer It contains the internal storage/control unit	4
(b)	(i) RFID reader (ii) Magnetic Ink Character Reader/MICR (iii) Bar code reader (iv) Chip reader	4

37 - (0417/13_Summer_2020_Q5) - Types And Components Of Computer Systems

	Four from: Faster switch on as the operating system does not need to load <u>Lighter and smaller than a laptop computer</u> therefore more portable Don't generate as much heat Battery life tends to last longer Smaller footprint Easier to use the touch screen as the keyboard is not in the way Less susceptible to viruses Less parts/no separate peripherals, such as a mouse Camera is easier to use	4
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