Cambridge IGCSE Level

ICT-P1

Information & Communication Technology

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TOPIC 1
TYPES AND COMPONENTS OF COMPUTER SYSTEMS

1   **0417/12/M/J/15/Q1**
This diagram shows a tower PC.

(a) Name **two** input devices apart from a keyboard and mouse, which could connect directly to the tower.

1 ....

2 ....

(b) Name **two** storage **devices** which would be available in the PC shown above.   [2]

1 ....

2 ....

(c) Name **two** output devices which could connect directly to the PC shown above.   [2]

1 ....

2 ....

    [2]

---

2   **0417/13/M/J/15/Q5**
Complete each sentence using a word from the list below.

(a) The type of processing used for updating bank
accounts at ATMs is called   ....

    [1]
(b) The type of access used on a magnetic tape is called   ....

    [1]
(c) The type of software used to create printed magazines
is called   ....

    [1]

batch	sensor	spreadsheet	serial
online	direct	random	DTP

3   **0417/11/O/N/15/Q5**

Complete each sentence using words from the following list.

ROM	a bar code reader	RAM	a chip reader
magnetic tape	a joystick	OCR	MICR

(a) The input device used in flight simulation is

.... [1]

(b) The type of memory used to store the work that the user is currently working on is

.... [1]

(c) A medium used to backup data is

.... [1]

4   **0417/11/O/N/15/Q16**

Discuss the advantages and disadvantages to a teacher of using a tablet computer instead of another type of computer.

....

....

....

....

....

....

....

....

....

....

....

....

.... [6]

5   **0417/12/O/N/15/Q2**

For each use, tick the **most** appropriate type of application software.

Use	Modelling ✓	Database ✓	Word processing ✓
Writing a letter			
Flight simulation			
Storing student records in a school			
Producing a business card			

[4]

6   **0417/12/O/N/15/Q3**

Tick the type of computer which would be **most** appropriate for each use of ICT.

Use	Mainframe ✓	Laptop ✓	Desktop ✓
Entering data from a Biology survey while out of school			
Massive transactions which need the use of many CPUs			
Students who need to transport their computer from home to use in school			
Personal use with better performance at lower cost			

[4]

7   **0417/12/O/N/15/Q18**

Give **three** reasons why files are backed up.

1 ....

....

2 ....

....

3 ....

....

[3]

8   0417/13/O/N/15/Q2

Tick the **most** appropriate method of inputting data for the following uses.

Use	Web cam ✓	Keyboard ✓	Scanner ✓
Applications where text has to be created rather than copied			
Inputting hard copy documents directly into a computer			
Inputting moving pictures from a fixed position into a computer			
Entering text directly into a word processing document			

[4]

9   0417/13/O/N/15/Q5

Complete each sentence using the **most** appropriate words from the following list.

a word processor   **a control program**   **a spreadsheet**

an inference engine   **a web authoring package**   **a search engine**

a measuring program   **a DTP package**

(a) The software used to find information on the internet is...

[1]

(b) The software which is a component of an expert system is ....

[1]

(c) The type of software used to create financial models is ....

[1]

10   0417/11/M/J/16/Q2

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

	applications (✓)	systems (✓)
Word processing		
Compilers		
Interpreters		
Spreadsheet		

[2]

11   0417/11/M/J/16/Q3

Tick whether the following statements about desktop and laptop computers are **true** or **false**.

	true (✓)	false (✓)
Most modern laptop computers have web cams built in.		
Desktop computers are not very portable.		
All desktop computers have a touchpad built in.		
Laptop computers are rarely supplied with a mouse.		

[2]

12   0417/12/M/J/16/Q2

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

	true (✓)	false (✓)
A microphone is an output device.		
The Control Unit is part of the Central Processing Unit.		
The Arithmetic and Logic Unit is part of the Central Processing Unit.		
A temperature sensor is an input device.		

[2]

13   0417/12/M/J/16/Q18

Discuss why different user interfaces require the use of different types of input device.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

14   **0417/13/M/J/16/Q1**
Data can be input to a computer using different devices.

Write down the **most** appropriate input device which will enable you to:

(a) type an essay

.... [1]

(b) select options from a drop down menu whilst moving the device

.... [1]

(c) read the temperature

.... [1]

(d) fly an aircraft in a video game.

.... [1]

15   **0417/11/O/N/16/Q1**
There are a number of different internal hardware devices.

Write down the most appropriate type of internal hardware that fits the following descriptions:

(a) A volatile device that is used to store data.

....[1]

(b) This is the main printed circuit board found in computer systems.

....[1]

(c) A non-volatile chip that stores the start-up commands.

....[1]

(d) This electronic device provides a computer with the ability to produce sounds.

....[1]

16   **0417/11/O/N/16/Q2**
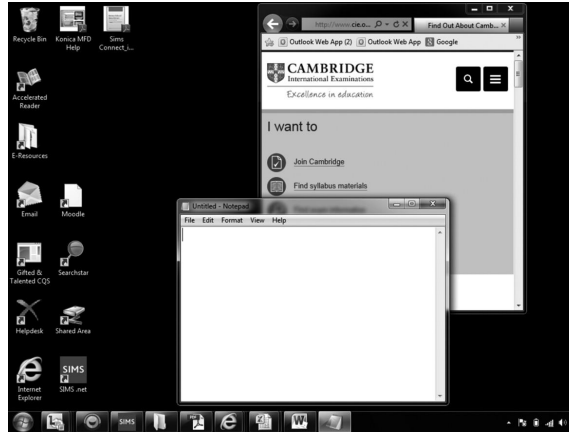
(a) Give the type of interface shown above.

....[1]

(b) One of the features of this type of interface is an icon. Describe what is meant by the term icon.

....

....[2]

(c) Identify **one** way you would select an icon using this type of interface.

....[1]

17   **0417/13/O/N/16/Q1**
Tick whether the following statements are **true** or **false**.

	true (✓)	false (✓)
Tablet computers have touch screens.		
Smartphones will only connect to the internet through WiFi.		
A tablet computer has a separate keyboard.		
Smartphones use a touchpad.		

[2]

18   0417/13/O/N/16/Q2
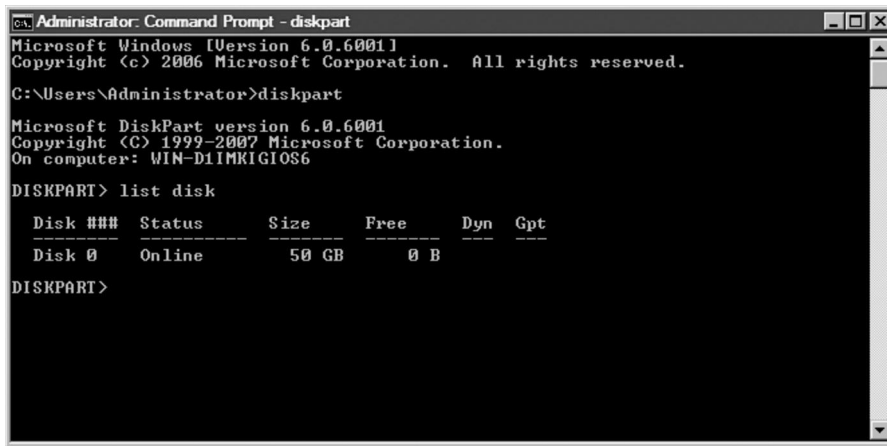
(a) Give the type of interface shown above.

....[1]

(b) Give a disadvantage of using this type of user interface.

....

....[1]

(c) Another type of interface is a graphical user interface (GUI).

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

	true (✓)	false (✓)
A GUI involves the use of windows and menus.		
User interaction with a GUI is intuitive.		
A GUI takes up a lot of memory and resources.		
Users have to learn a list of system commands in order to use a GUI.		

[2]

19   0417/13/O/N/16/Q3

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

	true (✓)	false (✓)
ROM is Real Optical Memory.		
RAM stores the instructions you are currently working on.		
ROM stores the BIOS.		
RAM allows the user to read and write data.		

[2]

20   **0417/12/M/J/17/Q1**
When a person buys goods in a supermarket they have to pay at the checkout.

(a) Identify **two** input devices used at the checkout.

1...

....

2...

.... [2]

(b) Identify **two** output devices used at the checkout.

1...

....

2...

.... [2]

21   **0417/13/M/J/17/Q1**
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]

22   0417/13/M/J/17/Q2

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]

23   0417/13/M/J/17/Q6/a/b/d

Midwest School library has a database system. Students who borrow books present their library cards containing their details. The librarian wishes to improve security by introducing biometric methods.

(a) Name **two** direct input methods the cards could use.

1...

....

2...

.... [2]

(b) Give **two** examples of biometric input.

1...

....

2...

.... [2]

24   0417/13/M/J/17/Q9

Describe the differences between ROM and RAM.

....

....

....

....

....

.... [4]

25   **0417/11/O/N/17/Q1**

There are many types of printer. Name the printer which best fits the descriptions given below.

(a) A printer that prints by pressing metal pins against an ink ribbon onto the paper

....[1]

(b) A printer that sprays tiny droplets of ink directly onto the paper

....[1]

(c) A printer that uses toner to transfer the print image to plain paper

....[1]

(d) A printer that uses resin to create solid objects

....[1]

26   **0417/11/O/N/17/Q 5 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]

27   **0417/12/O/N/17/Q2**

Complete the following sentences, using the most appropriate technology from the list below.

a 3D printer	**artificial intelligence**	**batch processing**	**biometrics**
a dot matrix printer	**a microphone**	**a password**	**a robot**
a scanner	**a speaker**		

(a) A printer that is capable of producing physical objects is called

....[1]

(b) The use of a computer to perform tasks that mimic or duplicate the functions of the human brain is called

....[1]

(c) A device used in a car production line to assemble a car is called

....[1]

(d) Authentication techniques that use fingerprints or retina scans is called

....[1]

---

28   0417/12/O/N/17/Q15

A word processing program uses a Graphical User Interface (GUI). Using examples from the word processing program describe **three** features of a GUI.

1 ....

....

2 ....

....

3 ....

....
                                                                                               [3]

---

29   0417/13/O/N/17/Q2

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

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

[2]

30   0417/13/O/N/17/Q16
State what is meant by OMR and MICR, giving an example of their use.

OMR ....

....

Example ....

....

MICR ....

....

Example ....

....
[4]

31   0417/11/M/J/18/Q1
Complete the following sentences, using the most appropriate items from the list below.

A 3D printer	**An ADC**	**A compiler**	**An interpreter**	**A microphone**
A monitor	**A numeric keypad**	**A speaker**	**A switch**	**A USB**

(a) .... is a device used to input a PIN.   [1]

(b) .... analyses and executes a program line by line.   [1]

(c) ....produces output in the form of solid objects.   [1]

(d) ....produces output in the form of sound.   [1]

32   **0417/13/M/J/18/Q1**

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]

33   **0417/13/M/J/18/Q2**

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]

34   **0417/11/M/J/19/Q3**

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

Keyboard   Linker   Mouse

Printer   Processor   Sound card   [2]

35   **0417/11/M/J/19/Q6**

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]

36   **0417/11/M/J/19/Q8/c**

Juan wants to create his report whilst he is working in the jungle.

Compare the advantages and disadvantages of using a smartphone rather than a laptop computer for creating his report.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

37   0417/12/M/J/19/Q1
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]

38   0417/12/M/J/19/Q14
Explain the difference between analogue data and digital data.

....

....

....

.... [2]

39   **0417/13/M/J/19/Q2**

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]

40   **0417/13/M/J/19/Q5**

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]

41   **0417/13/M/J/20/Q1**

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]

---

42   **0417/13/M/J/20/Q2**

(a) Write down the type of interface shown.
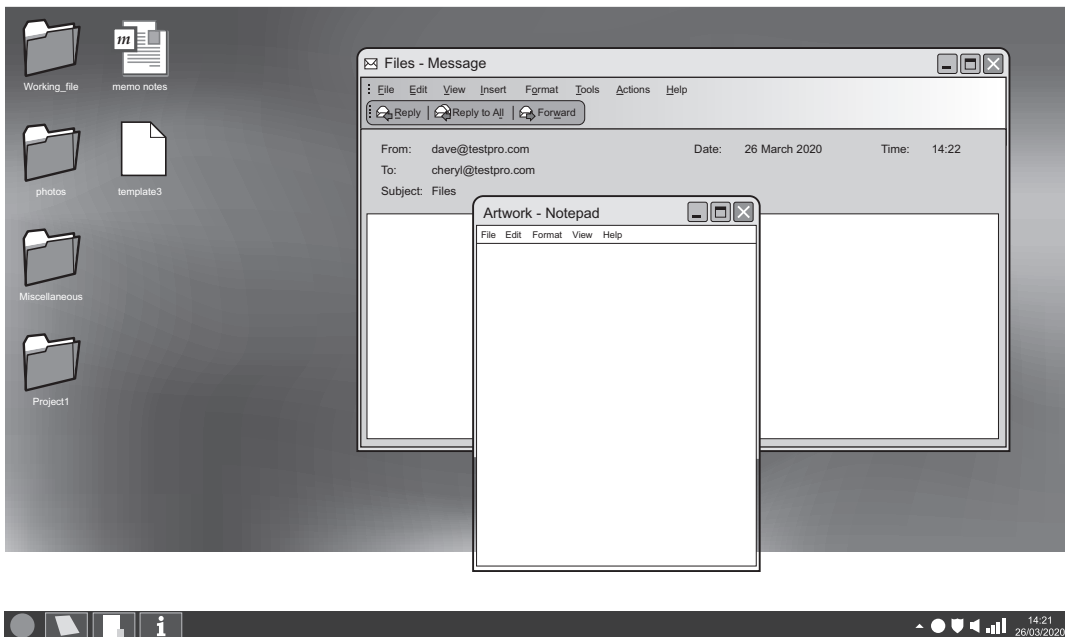
.... [1]

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

1..

....

2..

....

[2]

43   **0417/13/M/J/20/Q5**

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]

44   0417/11/M/J/20/Q1

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..

....
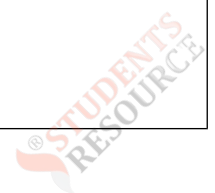
[2]

45   0417/11/M/J/20/Q2

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]

46   **0417/11/M/J/20/Q3**

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

(a) Describe the CPU including its role.

....

....

....

....

....

....

....

.... [4]

47   **0417/11/M/J/20/Q7**

The headteacher of a school has decided to replace desktop computers with laptop computers.

Describe the advantages and disadvantages of using a laptop computer rather than a desktop computer.

....

....

....

....

....

....

....

.... [4]

48   **0417/12/F/M/20/4**

Smart technology is increasingly being used in everyday life. Many people are now using smart devices such as smartwatches.

(a) Tick (✓) whether the following statements most appropriately refer to a **desktop computer**, a **tablet computer** or a **smartwatch**.

	desktop computer (✓)	tablet computer (✓)	smartwatch (✓)
A computer made up of separate units			
Is an example of wearable technology			
A portable device that allows text to be typed relatively easily			
Most easily used for fitness and health monitoring by runners			

[4]

(b) Smartphones are more likely to be used than laptop computers for everyday ICT use.

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

1...

....

2...

....

3...

....

[3]