ICT

0417 Past Papers

Chapter 2

Hardware and Software

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3   Tick (✓) which device produces solid objects.

A   Inkjet printer   ☐

B   Dot matrix printer   ☐

Question	
3	D

C   Laser printer   ☐

D   3D printer   ☐

4   For each of the following uses of data capture, name one appropriate direct data entry device. The devices must be different in each case.

(a) Contactless credit cards

.... [1]

(b) Multiple choice answers in an examination paper

.... [1]

(c) To scan items at a computerised till

.... [1]

Question	Answer
4(a)	Radio Frequency Identification/RFID reader
4(b)	Optical Mark Reader/OMR
4(c)	Bar Code reader/scanner

6   Complete the following sentences, using the most appropriate direct data entry device.

a bar code reader   a chip reader   MICR   a magnetic stripe reader

OCR   OMR   PIN pad   RFID reader

(a) The device that reads data from a card in a contactless card system is called

.... [1]

(b) The device that reads scanned text and converts it into a readable form is called

.... [1]

(c) The device that reads the data made up of black lines and spaces on household goods is called

.... [1]

Question	
6(a)	RFID reader
6(b)	OCR
6(c)	a bar code reader

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.

Magnetic stripe
Benefits
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

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Contactless
Benefits
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
Drawbacks
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

To achieve full marks all three methods must be discussed, the discussion
must also cover both the benefits and drawbacks.

One mark can be awarded for a reasoned conclusion

[8]

2 Circle **two** input devices that could be used in a smartphone.

HDD   magnetic stripe reader   microphone   mouse

remote control   speaker   touchpad   touch screen

[2]

Question	
2	Microphone Touch screen

2 **(a)** Circle **two** items that could be used to output data directly from a smartphone.

Blu-ray disc   microphone   mouse   screen

SD card   sensor   speaker   webcam

[2]

2(a)	Speaker Screen

2 Tick (✓) the most appropriate printer which relates to the following statements.

	3D (✓)	Dot matrix (✓)	Laser (✓)
This printer is an impact printer			
This printer uses toner			
This printer uses an inked ribbon			
This printer uses tomography			

	3D	Dot matrix	Laser
This printer is an impact printer		✓	
This printer uses toner			✓
This printer uses an inked ribbon		✓	
This printer uses tomography	✓		

2   MICR, OCR and OMR are examples of recognition systems.

Tick (✓) the most appropriate recognition system which relates to the following statements.

	MICR (✓)	OCR (✓)	OMR (✓)
This system magnetises the special characters on cheques in order to read them			
This method is used to read car number plates			
A bar code is an example of this system			
If the media from this system is photocopied it cannot be read by the recognition system			

[4]

	MICR	OCR	OMR
This system magnetises the special characters on cheques in order to read them	✓		
This method is used to read car number plates		✓	
A bar code is an example of this system			✓
If the media from this system is photocopied it cannot be read by the recognition system	✓		

11 The director of a museum in China is planning an exhibition on ancient civilisations. One of the exhibits is a full representation of a 10 000-year-old human. The Natural History Museum in London is planning to send a complete skeleton, but it is too fragile.

(a) Describe how a computer could be used to create a 3D copy of the skeleton which will then be printed in China.

....

11(a) | **Two** from:
The skeleton is scanned
A digital copy is made of the skeleton
Copy is saved
The data is sent via the internet to China

Three from:
Data is loaded into the software to prepare it for printing
Software slices the model into hundreds of layers
3D printer creates the model layer by layer
Binds them together

....

.... [5]

(b) Describe **four** benefits of using 3D printers.

1 ....

....

2 ....

Four from:
Products can be customised easily on request
Speed of producing the product is faster than making it by hand
Cheaper than making it by hand due to labour costs
Parts of equipment that are no longer made can be printed without having to manufacture them
Many copies of the original can be made
Saves the original from damage in transit
Create a fragile object from more robust materials

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3 ....

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4 ....

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[4]

1 Complete the following questions using the most appropriate items from the list below.

DVD RAM	SSD	Laser printer	Buzzer	Web-cam
Hard disk drives	Pen drive	Blu-ray disc	Magnetic tape	Mouse

(a) Identify **two** output devices from the list.

1 ....

2 .... [2]

(b) Identify **two** optical storage media from the list.

1 ....

2 .... [2]

Question	Answer	Marks
1(a)	Laser printer Buzzer	2
1(b)	DVD RAM Blu-ray disc	2

5 The managers of a company are concerned about the use of their car park. People are parking their cars there in order to visit a nearby shopping mall. The company has decided to install a system that reads number plates so it can monitor the cars entering the car park. People visiting the company will have registered their car number plate with the receptionist before they visit.

(a) Explain how this system would process the number plate to check that the car entering the car park has been registered with the receptionist.

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Question	Answer	Marks
5(a)	**Four** from Camera takes an image of the number plate/(front of the) vehicle Saves the image Software determines where on the image the number plate is Converts the image to text Conversion uses OCR/optical character recognition Saves/stores the text Compares the text with data saved in the database Confirms the driver is visiting the company	4

(b) When visitors sign in at reception they are now given a badge which contains an RFID chip. The chip is read in order to gain access to sections of the building. The previous system used badges which contained a bar code.

Compare and contrast the use of RFID chips with bar codes in this scenario.

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.... [6]

Question	Answer	Marks
5(b)	**Six** from **Comparisons** Both are direct data entry systems Both are used to communicate with the reader **Contrasts** Max **five** from RFID chips can be read from a greater distance/bar codes need to be closer to the reader Bar codes need to be in line of sight with the reader/RFID chips do not need to be RFID chips can be uploaded easier/bar codes require a brand new code RFID chips read at a faster rate RFID chips are more useable/more robust RFID chips are more secure	6

14 Bank cheques are usually read using Magnetic Ink Character Recognition (MICR). Recent developments mean that cheques can now be photographed by a smartphone and processed using Optical Character Recognition (OCR).

Discuss the advantages and disadvantages of using MICR rather than OCR for reading cheques.

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.... [6]

Question	Answer	Marks
14	**Advantages** Max **four** from More secure MICR characters cannot be read electronically after being photocopied MICR characters are difficult to forge Can be read even if the writing is written on/paper folded More accurate in reading Data is read faster Characters cannot be changed once printed **Disadvantages** Max **four** from Requires a specialist reader which are expensive More expensive to produce the writing Limited number of characters Cannot be read by standard smartphones Limited number of characters One mark available for a reasoned conclusion	6

1 Several items of data are input to a computer using direct data entry methods. Write down the most appropriate input device to input each item of data.

(a) data written in special ink at the bottom of bank cheques

.... [1]

(b) information on the label of a supermarket product

.... [1]

(c) shaded in boxes on a student's examination answer sheet

.... [1]

(d) debit card details input at an ATM

.... [1]

1 (a) Magnetic Ink Character Reader/Optical Character Reader   [1]

(b) bar code reader   [1]

(c) Optical Mark Reader   [1]

(d) magnetic stripe reader/chip and PIN reader   [1]

6 Describe **three** types of medical aid which can be produced using a 3D printer.

1 ....

....

2 ....

....

3 ....

.... [3]

6 Any **three** from:
- surgical and diagnostic aids
- prosthetics and medical products,
- tissue engineering
- artificial blood vessels
- designs of medical tools and equipment [3]

9 Johann is going on holiday to a different country. He will need to take his passport. He has a new type of passport which has an RFID chip in it. He will be passing through automated passport control gates.

(a) Describe what an RFID chip consists of.

....

....

....

.... [2]

(b) Describe how RFID will be used as he passes through passport control.

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....

....

....

.... [3]

9 (a) Any **two** from:
   – an integrated circuit…
   – …which contains an aerial…
   – …which receives and transmits data   [2]

(b) Any **three** from:
   – he places his passport against the RFID reader
   – he stands in front of a scanner/fingerprint scanner is used
   – his facial characteristics/fingerprints are compared with…
   – …those stored on the RFID chip   [3]

6   Circle **three** items which are used as output devices.

Buzzer   CD/RW drive   Keyboard   LCD monitor

Speaker   Solid state drive   Trackerball   Web cam

                                                                                              [3]

Question	Answer	Marks
6	Buzzer LCD monitor Speaker	3

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	

Question	Answer	Marks
1(i)	MICR	1
1(ii)	PIN pad	1
1(iii)	Bar code reader	**May/June 2019/11**
1(iiii)	RFID reader	1

4 Tick whether the following examples refer to **dot matrix**, **laser** or **3D** printers.

	dot matrix (✓)	laser (✓)	3D (✓)
This printer uses continuous stationery.			
This printer uses toner.			
This printer is most suitable for a quiet environment.			
This printer produces solid objects.			

[4]

Question	Answer				Marks
4		dot matrix	laser	3D	4
	This printer uses continuous stationery.	✓			
	This printer uses toner.		✓		
	This printer is most suitable for a quiet environment.		✓		
	This printer produces solid objects.			✓	

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

Keyboard   MICR   Microphone

Mouse   Printer   RFID

[2]

Question	Answer	Marks
3	RFID MICR	2

3 A bank has trialled the replacement of Magnetic Ink Character Recognition (MICR) for the details at the bottom of the cheques with bar codes.

Describe **two** advantages of using Magnetic Ink Character Recognition (MICR) rather than bar codes when processing cheques.

....

....

....

.... [2]

Question	Answer	Marks
3	**Two** from: The data on the MICR is human readable easier to check the data Cannot be read by MICR if the cheque is illegally photocopied Higher security than using bar codes	2

4   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.

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....

....

.... [2]

Question	Answer	Marks
4	**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

2   Tick the most appropriate device for reading the details from the following media:

	Optical Mark Reader (✓)	Magnetic Ink Character Reader (✓)	Bar code reader (✓)	Chip and PIN reader (✓)
Debit card				
Bank cheques				
A candidate's responses for multiple-choice exam questions				
A label on a can of soup				

[4]

Question	Answer					Marks
2		Optical Mark Reader (✓)	Magnetic Ink Character Reader (✓)	Bar code reader (✓)	Chip and PIN reader (✓)	4
	Debit card				✓	
	Bank cheques		✓			
	A candidate's responses for multi-choice exam questions	✓				
	A label on a can of soup			✓		

3 (a) Identify **two** uses of 3D printing that help doctors and patients in hospitals.

1 ....

....

2 ....

....

[2]

(b) Identify **two** uses of holographic imaging that help doctors and patients in hospitals.

1 ....

....

2 ....

....

[2]

Question	Answer	Marks
3(a)	**Two** from: Create prosthetics Create dental implants Create customised tablets Create skeletal model Create blood vessels Create anatomical models for surgery	2
3(b)	**Two** from: Create MRI scan images Create ultrasound images Create 3D views of our internal organs	2

1   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]

Question	Answer	Marks
1(a)	A numeric keypad	1
1(b)	An interpreter	1
1(c)	A 3D printer	1
1(d)	A speaker	1

2 Tick whether the following statements are examples of a **3D** printer, a **dot matrix** printer or a **laser** printer.

	3D (✓)	dot matrix (✓)	laser (✓)
A printer that uses toner.			
A printer that uses continuous stationery.			
A printer that can be used to make physical models.			
A printer that prints layer by layer.			

[4]

Question	Answer				Marks
2		3D (✓)	dot matrix (✓)	Laser (✓)	4
	A printer that uses toner.			✓	
	A printer that uses continuous stationery.		✓		
	A printer that can be used to make physical models.	✓			
	A printer that prints layer by layer.	✓			

3 Data can be input into computers using direct data entry.
Tick the most appropriate method of direct data entry for each statement.

	MICR (✓)	OMR (✓)	OCR (✓)
Used to read magnetic data on cheques.			
Used to read car number plates.			
Used when entering handwritten text.			
Used to read multiple-choice examination responses.			

[4]

Question	Answer				Marks
3		MICR (✓)	OMR (✓)	OCR (✓)	4
	Used to read magnetic data on cheques.	✓			
	Used to read car number plates.			✓	
	Used when entering handwritten text.			✓	
	Used to read multiple-choice examination responses.		✓		

1   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]

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

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

a 3D printer   **a dot matrix printer**   **a laser printer**   **a light sensor**

a magnetic ink character reader   **a microphone**   **an optical mark reader**

a speaker   **a web cam**   **a wide format printer**

(a) A device that is most suited to being used to produce hard copy output in a general office environment is called

.... [1]

(b) The input device that reads the cheque number from a bank cheque is called

.... [1]

(c) A device that outputs hard copy large architectural drawings is called

.... [1]

(d) A device that outputs sound is called

.... [1]

Question	Answer	Marks
2(a)	a laser printer	1
2(b)	a magnetic ink character reader	1
2(c)	a wide format printer	1
2(d)	a speaker	1

1 Complete the following sentences, using items from the list below.

a bar code reader   a chip reader   a laser printer   a magnetic ink character reader

a microphone   a PIN pad   a retina scanner   a touch pad

(a) A device that reads black and white lines on a product is called

....[1]

(b) A device that inputs the sound made by a human voice is called

....[1]

(c) A device which is used to read the data from the bottom of bank cheques is called

....[1]

(d) An input device used to input the biometric details of the eye is called

....[1]

Question	Answer	Marks
1	(a) a bar code reader	1
	(b) a microphone	1
	(c) a magnetic ink character reader	1
	(d) a retina scanner	1

1   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]

Question	Answer	Marks
1(a)	Any **two** from: – Weighing scales – Keyboard/key pad – Bar code scanner/reader – Chip reader/card reader – Magnetic stripe reader – Pin pad – Light sensor (on conveyor belt) – Touch screen	2
1(b)	Any **two** from: – Printer – Screen/monitor – Speaker/buzzer – Warning light/lamp	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]

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

1 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]

Question	Answer	Marks
1(a)	Dot matrix printer	1
1(b)	Ink Jet printer	1
1(c)	Laser printer	1
1(d)	3D printer	1

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

	true (✓)	false (✓)
Answers to multiple choice examination papers can be read using an Optical Mark Reader.		
MICR reads the information on a credit card.		
The chip on a credit card is read by a PIN reader.		
An RFID chip can be used to track stock.		

[2]

Question	Answer			Marks
3		true (✓)	false (✓)	2
	Answers to multiple choice exam papers can be read using an Optical Mark Reader.	✓		
	MICR reads the information on a credit card.		✓	
	The chip on a credit card is read by a PIN reader.		✓	
	An RFID chip can be used to track stock.	✓		

4 correct answers – 2 marks
2 or 3 correct answers – 1 mark
0 or 1 correct answer – 0 marks

2 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]

Question	Answer	Marks
2(a)	a 3D printer	1
2(b)	artificial intelligence	1
2(c)	a robot	1
2(d)	biometrics	1

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

	true (✓)	false (✓)
CRT monitors use more power than TFT monitors		
A touch screen can be used as an input device or an output device		
A dot matrix printer produces high quality graphics		
A motor is an input device		

[2]

Question	Answer			Marks
3		true (✓)	false (✓)	2
	CRT monitors use more power than TFT monitors	✓		
	A touch screen can be used as an input device or an output device	✓		
	A dot matrix printer produces high quality graphics		✓	
	A motor is an input device		✓	
	4 correct answers - 2 marks 2 or 3 correct answers - 1 mark 0 or 1 correct answers - 0 marks			

3 Tick whether the following statements about output devices are **true** or **false**.

	true (✓)	false (✓)
A multimedia projector is used to output slide shows.		
A laser printer is a type of page printer.		
An inkjet printer cartridge lasts longer than a laser printer toner cartridge producing the same output.		
A dot matrix printer produces very high quality printouts quickly.		

[2]

3

	TRUE (✓)	FALSE (✓)
A multimedia projector is used to output slide shows.	✓	
A laser printer is a type of page printer.	✓	
An inkjet printer cartridge lasts longer than a laser printer toner cartridge producing the same output.		✓
A dot matrix printer produces very high quality printouts quickly.		✓

4 correct answers – 2 marks
2 or 3 correct answers – 1 mark
1 correct – 0 marks

[2]

1   Data can be input to a computer using direct data entry methods.

Write down the most appropriate device to input the following:

(a) information from the chip in an electronic passport

.... [1]

(b) text from an id card

.... [1]

(c) account details from the front of a credit card at an EFTPOS terminal

.... [1]

(d) account details from the back of a credit card at an EFTPOS terminal

.... [1]

---

1   (a) RFID reader   [1]

(b) Optical Character Reader   [1]

(c) Chip reader   [1]

(d) Magnetic stripe reader   [1]

10 When a bank cheque is presented to a bank it is sent off to a cheque clearing centre.

(a)   (i)   Give **three** items of information that are pre-printed on the cheque in magnetic ink.

1 ....

....

2 ....

....

3 ....

....

[3]

(ii) Describe how MICR is used to read these details from the cheque.

....

....

....

....

....

.... [3]

(b) Explain why magnetic ink is used rather than bar codes on a cheque.

....

....

....

.... [2]

10 (a) (i) Account number   [1]
           Bank/branch sort code   [1]
           Cheque number   [1]

      (ii) **Three** from:

           Requires a special Magnetic Ink Character reader/scanner/Details are scanned
           The magnetic ink on the cheque passes over a magnet in the reader/scanner which
           charges/magnetises the ink
           The MICR reader/scanner then reads the magnetic signal given out by the magnetic ink
           characters on the cheque.
           Each character produces a unique signal which is read and translated by the MIC reader
                                                                                  [3]

   (b) **Two** from:

       More difficult to forge
       Even if overwritten/damaged can still be read by computer
       Information is human readable   [2]

1   Tick whether the following statements are true or false.

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

[2]

4 correct answers – 2 marks
2 or 3 correct answers – 1 mark
0 or 1 correct answer – 0 marks

4   Different devices connected to the computer have a number of different characteristics.

(a) Name the type of printer that is best suited to operate in harsh conditions.

....[1]

(b) Name a type of monitor that can reduce the effects of eye strain.

....[1]

(c) Name the type of printer that produces a solid object.

....[1]

(d) Name the type of monitor that is an input device on which output can be seen and is found in a public information system.

....[1]

4	(a) Dot matrix	[1]
	(b) TFT/LED/LCD (allow full names such as Thin-Film-Transistor)	[1]
	(c) 3D printer/3D inkjet printer	[1]
	(d) Touchscreen	[1]

3   Complete the table by identifying the **most** appropriate input device for each type of application.

Application	Device
Inputting diagrams as they are being drawn	
Inputting printed text to a computer to be processed by another software package	
Inputting moving pictures, often pre-recorded, into a computer	
Used by a pilot to control a flight simulator	

[4]

3

Inputting diagrams as they are being drawn	**Graphics tablet**	[1]
Inputting printed text to a computer to be processed by another software package	**Optical Character Reader**	[1]
Inputting moving pictures, often pre-recorded, into a computer.	**Video camera**	[1]
Used by a pilot to control a flight simulator	**Joystick**	[1]

5 Complete the sentences using words from the list below.

(a) The device used for switching channels on a television is called

....
[1]

(b) A method of inputting answers from a candidate's exam paper is called

....
[1]

(c) A printer which is suitable for producing large volumes of high quality printout is called

....
[1]

ROM   a remote control   RAM

a dot matrix printer   a trackerball   OMR

a laser printer   an inkjet printer

5 (a) The device used for switching channels on a television is called   **a remote control**   [1]

(b) A method of inputting answers from a candidate's exam paper is called   **OMR**   [1]

(c) A printer which is suitable for producing large volumes of high quality printout is called   **a laser printer**   [1]

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

Use	MICR ✓	Trackerball ✓	Sensor ✓
Reading data from a cheque			
Inputting the temperature of a greenhouse			
People with limited motor skills using computers			
Inputting the amount of humidity in a weather station			

[4]

2

Use	MICR ✓	Trackerball ✓	Sensor ✓	
Reading data from a cheque	✓			[1]
Inputting the temperature of a greenhouse			✓	[1]
People with limited motor skills using computers		✓		[1]
For inputting the amount of humidity in a weather station			✓	[1]

3 Complete the table by identifying the **most** appropriate output device for each type of application.

Application	Device
Produces very high quality printing where speed is not an issue	
Production of continuous stationery where noise is not an issue	
Produces rapid, high quality and high volume printing	
Produces very large printouts such as size A0	

[4]

3

Application	Device	
Produces very high quality printing where speed is not an issue	Inkjet printer	[1]
Production of continuous stationery where noise is not an issue	Dot matrix printer	[1]
Produces rapid, high quality and high volume printing	Laser printer	[1]
Produces very large printouts such as size A0	Graph plotter	[1]

5 There are a number of methods of direct data entry.

Complete the sentences using words from the list below.

(a) The method of inputting bank codes from the bottom of a cheque is called

....[1]

(b) The device used for inputting details from a label on a product is called

....[1]

(c) The device used for inputting data directly from a bank card is called

....[1]

a bar code reader	**a PIN pad**	**OMR**
MICR	**a keyboard**	**a graphics tablet**
a mouse	**a chip reader**	

5 **(a)** MICR   [1]

   (b) a bar code reader   [1]

   (c) Chip reader   [1]

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

Use	MICR ✓	Bar code reader ✓	OMR ✓
Inputting exam answers from a multiple choice test paper			
Inputting the account number from the bottom of a cheque			
Inputting the ISBN from the back cover of a book			
Inputting pencil marks from a school register			

[4]

2

Use	MICR ✓	Bar code reader ✓	OMR ✓	
Inputting exam answers from a multi choice test paper			✓	[1]
Inputting the account number from the bottom of a cheque	✓			[1]
Inputting the ISBN from the back of a book		✓		[1]
Inputting pencil marks from a school register			✓	[1]

2 Tick the **most** appropriate output device for each of the following applications.

Application	Graph plotter ✓	Laser printer ✓	Dot matrix printer ✓
Rapid, high quality and high volumes of output			
CAD, where large printouts are required such as A0			
Industrial environments such as car repair companies			
Printing on multipart forms			

[4]

2

Application	Graph plotter ✓	Laser printer ✓	Dot matrix printer ✓	
Rapid, high quality and high volumes of output		✓		[1]
CAD where large printouts are required such as A0	✓			[1]
Industrial environments such as car repair companies			✓	[1]
Printing on multipart forms			✓	[1]

5   Complete each sentence using words from the following list.

ROM	**a bar code reader**	**RAM**
magnetic tape	**a joystick**	**OCR**
a chip reader	**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]

5	(a)	The input device used in flight simulation is	**a joystick**	[1]
	(b)	The type of memory used to store the work that the user is currently working on is	**RAM**	[1]
	(c)	A medium used to backup data is	**magnetic tape**	[1]

5   There are a number of methods of direct data entry.

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

a bar code reader	a touch pad	OCR
a magnetic stripe reader	a trackerball	a graphics tablet
a touch screen	a PIN pad	

(a) The inbuilt device which moves the cursor when using a laptop is called

....[1]

(b) The device used for selecting an icon so a bar code label can be printed in a supermarket is called

....[1]

(c) The device used for controlling a pointer on a screen when the user has limited motor skills is called

....[1]

---

5   (a) The inbuilt device which moves the cursor when using a laptop is called
                                                        a touch pad   [1]

(b) The device used for selecting an icon so a bar code label can be
printed in a supermarket is called   a touch screen   [1]

(c) The device used for controlling a pointer on a screen when the user
has limited motor skills is called   a trackerball   [1]

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2 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]

2

Use	Web cam ✓	Keyboard ✓	Scanner ✓	
Applications where text has to be created rather than copied		✓		[1]
Inputting hard copy documents directly into a computer			✓	[1]
Inputting moving pictures from a fixed position into a computer	✓			[1]
Entering text into a word processing document		✓		[1]

3   Explain what is meant by the following terms, giving examples of their use.

MICR ....

....

....

....

OMR...

....

....

.... [4]

---

3   MICR –
     Magnetic Ink Character Recognition/Reader   [1]
     Used for processing bank cheques/Reads the characters at the bottom of bank cheques   [1]

     OMR –
     Optical Mark Recognition/Reader/position of <u>pencil/pen</u> marks are read by scanner/Reader   [1]
     Used for processing exam papers/school registers/lottery/multiple choice questionnaires/positions
     of marks identified on exam papers/school registers/lottery/multiple choice questionnaires   [1]

4   Tick **True** or **False** next to each of these statements.

	True	False
OMR is used to read data from multi choice question papers.		
OCR is used to read data from word processed documents.		
DTP is used to create financial models.		
Regular use of computers improves your eyesight.		

[4]

4

	True ✔	False ✔	
OMR is used to read data from multi choice question papers.	✔		[1]
OCR is used to read data from word processed documents.	✔		[1]
DTP is used to create financial models.		✔	[1]
Regular use of computers improves your eyesight.		✔	[1]

3   Tick whether the following statements are **True** or **False**.

	True	False
Viruses can be transmitted by opening e-mail attachments.		
MICR is used to read data from bar codes.		
Hard discs can store more data than Blu-ray discs.		
Regular use of computers can cause headaches.		

[4]

3

	True	False
Viruses can be transmitted by opening e-mail attachments.	✔	
MICR is used to read data from bar codes		✔
Hard discs can store more data than Blu-ray discs	✔	
Regular use of computers can cause headaches	✔	

[4]

5   Tick **three** input devices that would be used at an EFTPOS terminal in a supermarket.

	✓
Chip reader	
Web cam	
Printer	
Buzzer	
Keypad	
Bar code reader	
TFT screen	

[3]

5

Chip reader	✓
Web cam	
Printer	
Buzzer	
Keypad	✓
Bar code reader	✓
TFT screen	

[1]

[1]

[1]

10 Complete each sentence below using one item from the list.

a bar code reader	a data logger	a chip reader
MICR	OMR	a robot
a simulation	validation	verification

Data from a bank card is input using ....

Data from a product in a supermarket is input using ....

Data from a cheque is input using ....

Fixing wheels to a car on a production line would be done by .... [4]

---

10 (i) A chip reader [1]

(ii) A bar code reader [1]

(iii) MICR [1]

(iv) A robot [1]

---

2 Ring **two** items which are input devices.

| DVD RAM | laser printer | magnetic disc |
| number pad | speakers | trackerball |

[2]

---

2 DVD RAM   laser printer   magnetic disc

(number pad)   speakers   (trackerball) [2]

---

6   Draw **four** lines on the diagram to match the use to its **most appropriate** input device.

Use   Input device

To input details from a bank card   Joystick

To input data from a school register   Chip reader

To input details of a product in a supermarket   Optical mark reader

To control an object in a computer game   Bar code reader

[4]

6	To input details from a bank card	Joystick
	To input data from a school register	Chip reader
	To input details of a product in a supermarket	Optical mark reader
	To control an object in a computer game	Bar code reader
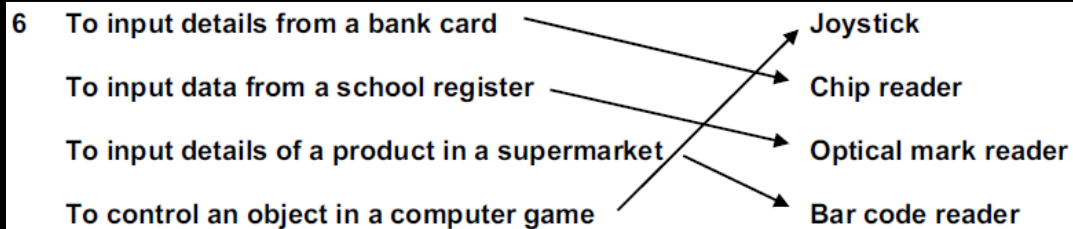
[4]

8   Explain what is meant by OCR and give **one** example of its use.

....

....

....

....

....

....   [3]

8	**Two** from:	
	Optical Character Recognition/Reader	
	Text is read by scanner	
	Image compared with characters stored in computer	
	Converted to text for use with other software	[2]
	Utility bills/word processors/ANPR/identity cards	[1]

5 Draw **five** lines on the diagram to match the input device to its **most appropriate** use.

Input device	Use

Bar code reader   to enter hard copy images into a computer

Microphone   creating a piece of text

Scanner   selecting items from a menu

Keyboard   inputting data from a food item at a POS

Mouse   creating a voice over for a presentation

[5]

5 Bar code reader → To enter hard copy images into a computer [1]

   Microphone → creating a piece of text [1]

   Scanner → selecting items from a menu [1]

   Keyboard → inputting data from a food item at a POS [1]

   Mouse → creating a voice over for a presentation [1]

2 Ring **two** items which are output devices.

disc drive	laser printer	light pen
microphone	TFT monitor	web cam

[2]

2 disc drive   (laser printer)   light pen   [1]

   Microphone   (TFT monitor)   web cam   [1]

4 Complete the following sentences using the **most appropriate** device from this list.

| A graphics tablet | A dot matrix printer | An inkjet printer |
| A joystick | A keypad | A multimedia projector |

(a) .... is used to print high quality photographs.

(b) .... is used to input freehand drawings.

(c) .... is used to input preset values into control systems.

(d) .... is used to show slides.

(e) .... is used to control a flight simulator.

[5]

4	An inkjet printer	is used to print high quality photographs	[1]
	A graphics tablet	is used to input freehand drawings	[1]
	A keypad	is used to input preset values into control systems	[1]
	A multimedia projector	is used to show slides	[1]
	A joystick	is used to control a flight simulator	[1]

1 Name the devices **A**, **B**, **C** and **D** using the words from the list.

A	B	C	D

bar code reader	dot matrix printer	joystick	laser printer
microphone	scanner	speakers	trackerball

A .... B ....
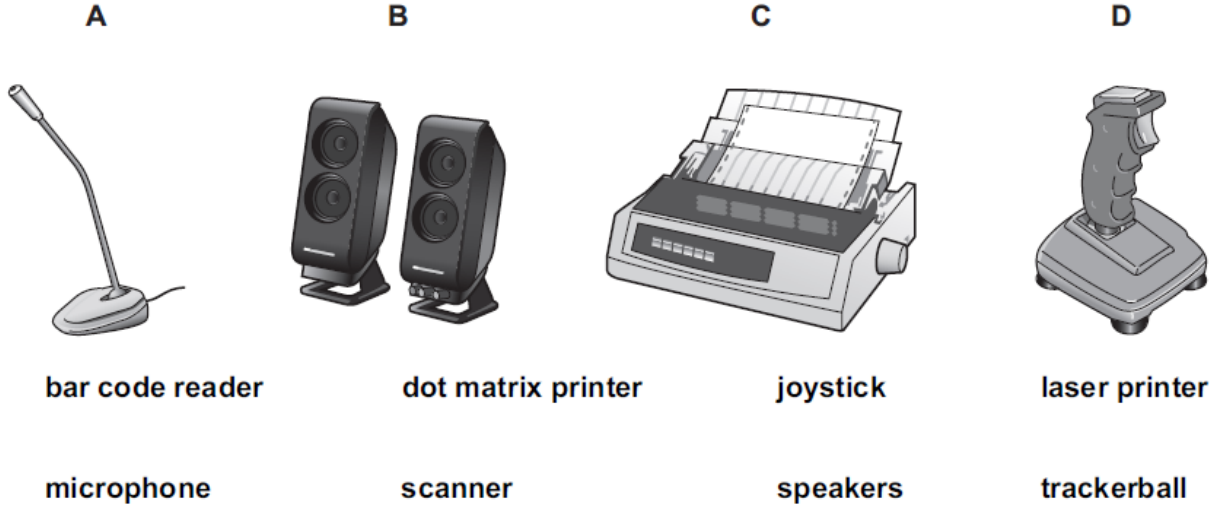
C .... D ....

[4]

1 A microphone   B speakers   [1], [1]
   C dot matrix printer D joystick   [1], [1]

4 Draw **five** lines on the diagram to match the input device to its **most appropriate** use.

Input Device	Use
Remote control	to input data at a POS
Electronic scales	playing a video game
Joystick	inputting text so it can be processed by a software package
Optical Character Reader	an input device in a burglar alarm system
Sound sensor	to operate a multimedia projector

[5]

4

Remote control	to input data at a POS [1]
Electronic scales	playing a video game [1]
Joystick	Inputting text so it can be processed by a software package [1]
Optical Character Reader	an input device in a burglar alarm system [1]
Sound sensor	to operate a multimedia projector [1]

1 Name the input devices **A**, **B**, **C** and **D** using the words from the list.
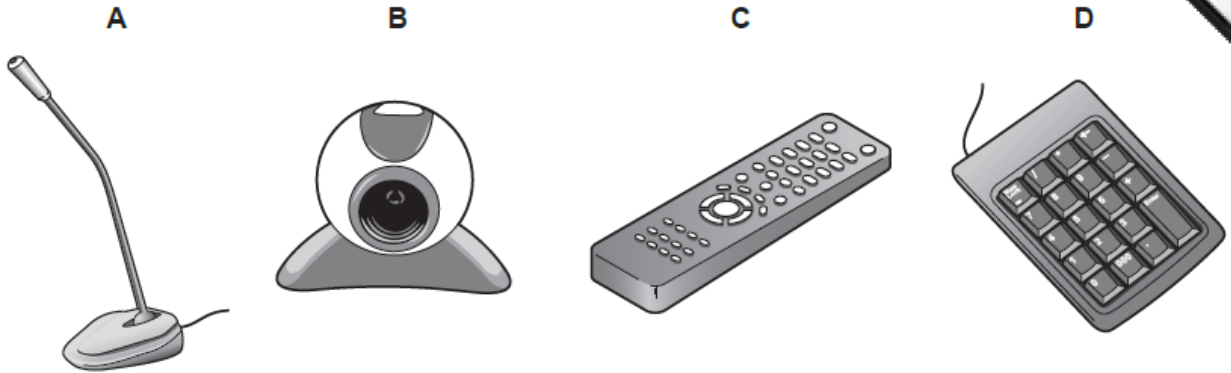
A B C D

digital camera	microphone	number pad	remote control
scanner	touch pad	trackerball	web cam

A .... B ....

C .... D ....

[4]

1 A Microphone
B Webcam
C Remote control
D Number pad

1 Name the output devices **A**, **B**, **C** and **D** using the words from the list.

A

B

C

D

CRT monitor   dot matrix printer   laser printer   motor

multimedia projector   plotter   speakers   trackerball

A ....

B| ....

C ....

D ....

[4]

1	A	Laser printer
	B	Speakers
	C	CRT Monitor
	D	Plotter

2 Ring **two** items which are input devices.

buzzer	DVD R	joystick
magnetic tape	plotter	touch pad

[2]

2	buzzer	DVD R	(joystick)	[1]
	magnetic tape	plotter	(touch pad)	[1]

1 Name the items **A**, **B**, **C** and **D** using the words from the list.

A

B

C

D

digital camera	flash memory card	joystick	magnetic disc
magnetic stripe	scanner	touch pad	web cam

A ....   B ....

C ....   D ....

[4]

1	A	Flash memory card
	B	Magnetic disc
	C	Magnetic stripe
	D	Joystick

2 Ring **two** items which are output devices.

      CRT monitor   **DVD ROM**   **magnetic tape**

      number pad   **plotter**   **trackerball**

[2]

2	(CRT monitor)	DVD ROM	magnetic tape	[1]
	Number pad	(plotter)	trackerball	[1]

4 Complete each sentence below using **one** item from the list.

      A bar code reader   **A dot matrix printer**   **A graphics tablet**

      A laser printer   **A microphone**   **A multimedia projector**

      A presence check   **A speaker**   **A temperature sensor**

      A magnetic tape

(a) .... produces hard copy in harsh conditions.

(b) .... inputs sounds.

(c) .... is used to show slideshows.

(d) .... is a validation rule.

(e) .... is used to create backups from a server's hard disc.

[5]

4	(a) **A dot matrix printer**	produces hard copy in harsh conditions.	[1]
	(b) **A microphone**	inputs sounds.	[1]
	(c) **A multimedia projector**	is used to show slideshows.	[1]
	(d) **A presence check**	is a validation rule.	[1]
	(e) **A magnetic tape**	is used to create backups from a server's hard disc.	[1]

6   Draw **four** lines on the diagram to match the use to its most **appropriate** input device.

                                      Use   Input device

                    to select options from a list   keyboard

                    to type data into a database   optical mark reader

            to input candidate examination answers   chip reader
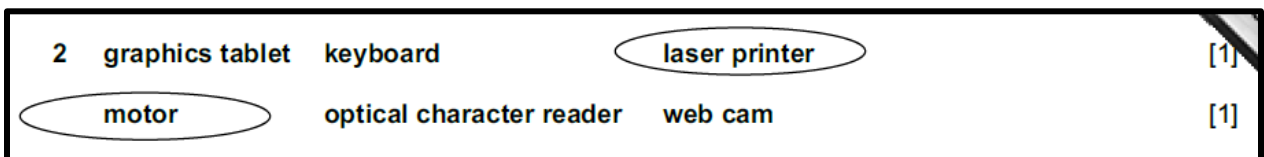
            to input data directly from a bank card   mouse

                                                                          [4]

6   to select options from a list ⟶ keyboard

     to type data into a database ⟶ optical mark reader

     to input candidate examination answers ⟶ chip reader

     to input data directly from a bank card ⟶ mouse   [4]
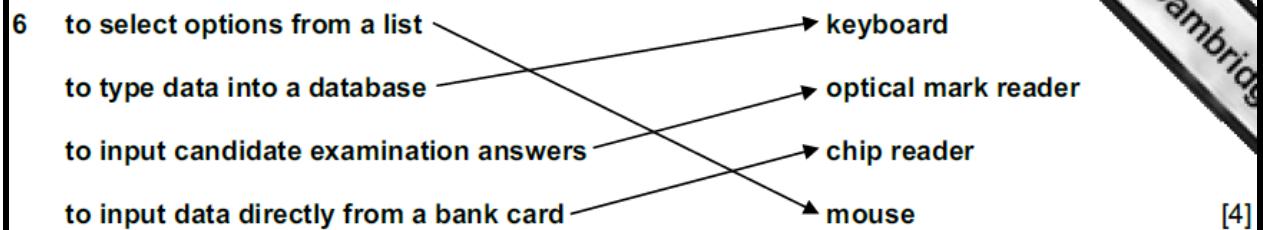
2   Ring **two** items which are output devices.

     graphics tablet   keyboard   laser printer

     motor   optical character reader   web cam

                                                                          [2]

2   graphics tablet   keyboard   (laser printer)   [1]

     (motor)   optical character reader   web cam   [1]

4   Complete the following sentences using the **most appropriate** device from this list.

A graph plotter　　　　　**A dot matrix printer**　　　　　**A laser printer**

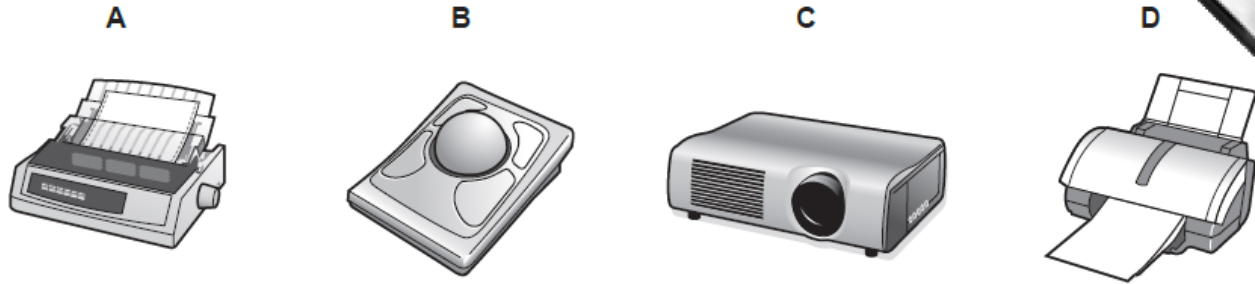**A buzzer**　　　　　**A multimedia projector**　　　　　**A trackerball**

(a)　..................................... is used to print on continuous multipart stationery.

(b)　..................................... is used to output sound.

(c)　..................................... is used in CAD applications for very large printouts.

(d)　..................................... is used to produce high quality and high volume printouts.

(e)　..................................... is used to move a pointer on a screen.

[5]

4			
(a)	**A dot matrix printer**	is used to print on continuous multi-part stationery	[1]
(b)	**A buzzer**	is used to output sound	[1]
(c)	**A graph plotter**	is used in CAD applications for very large printouts.	[1]
(d)	**A laser printer**	is used to produce high quality and high volume printouts.	[1]
(e)	**A tracker ball**	is used to move a pointer on a screen.	[1]

1 Name the devices **A**, **B**, **C** and **D** using the words from the list.

A	B	C	D

bar code   dot matrix printer   flash memory card   inkjet printer

monitor   multimedia projector   scanner   trackerball

A .... B ....

C .... D ....

[4]

1	A	dot matrix printer	B	trackerball
	C	multimedia projector	D	inkjet printer

4 Draw **five** lines on the diagram to match the input device to its most **appropriate** use.

Input Device   Use

Mouse   to input voiceovers for a presentation

Joystick   to input a PIN

Optical Mark Reader   to select options from a menu

Microphone   to operate a flight simulator

Number pad   to input candidate responses on examination papers

4	Mouse	to input voiceovers for a presentation	[1]
	Joystick	to input a PIN	[1]
	Optical Mark reader	to select options from a menu	[1]
	Microphone	to operate a flight simulator	[1]
	Number pad	to input candidate responses on examination papers	[1]

1   Name the devices **A**, **B**, **C** and **D** using the words from the list.

A

B

C
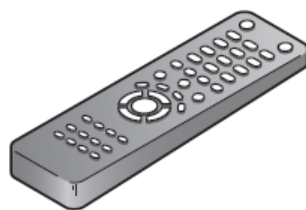
D
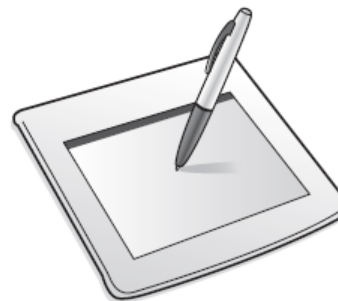
A   ....

B   ....

C   ....

D   ....

[4]

1   A   Pen drive (1)   B   Chip reader (1)
    C   Remote control (1)   D   Graphics tablet (1)