Write your name here

Surname

Other names

**Pearson Edexcel
International GCSE**

Centre Number

Candidate Number

Information and Communication Technology

Paper 1: Written Paper

Monday 14 May 2018 – Morning
Time: 1 hour 30 minutes

Paper Reference
4IT0/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over

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SECTION A

Answer ALL questions.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 The most appropriate type of software for writing a letter is:

- ☒ **A** spreadsheet software
- ☒ **B** control software
- ☒ **C** word processing software
- ☒ **D** database software

(Total for Question 1 = 1 mark)

2 The software used to find information on the internet is:

- ☒ **A** image editing software
- ☒ **B** presentation software
- ☒ **C** web browsing software
- ☒ **D** web authoring software

(Total for Question 2 = 1 mark)

3 Mary has a new dishwasher. The dishwasher has an in-built device that controls the water level.

This type of device is known as:

- ☒ **A** an embedded computer
- ☒ **B** a console
- ☒ **C** a super computer
- ☒ **D** a laptop

(Total for Question 3 = 1 mark)

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4 The device used to detect that a printer is out of paper is a:

- ☒ **A** monitor
- ☒ **B** plotter
- ☒ **C** scanner
- ☒ **D** sensor

(Total for Question 4 = 1 mark)

5 A school has a network of computers connected to a server on a single site.

This type of network is a:

- ☒ **A** Virtual Private Network
- ☒ **B** Wide Area Network
- ☒ **C** Peer-to-Peer Network
- ☒ **D** Local Area Network

(Total for Question 5 = 1 mark)

6 An external hard drive is connected to a PC.

An external hard drive is a type of:

- ☒ **A** control device
- ☒ **B** primary storage
- ☒ **C** secondary storage
- ☒ **D** input device

(Total for Question 6 = 1 mark)

7 Which **one** of these measures the quality of a screen display?

- ☒ **A** Window size
- ☒ **B** Resolution
- ☒ **C** Contrast
- ☒ **D** Icon size

(Total for Question 7 = 1 mark)

P 5 3 3 5 7 R A 0 3 2 4

8 Julie has a user account on her college network.

Students can access their files on any computer.

To prevent other students accessing Julie's files when she leaves a computer, she should:

☒ **A** close all software applications

☒ **B** disconnect from the internet

☒ **C** log out of the network

☒ **D** switch off the monitor

(Total for Question 8 = 1 mark)

9 The type of software that monitors activity on a computer without the user's permission is:

☒ **A** shareware

☒ **B** encryption

☒ **C** licensing

☒ **D** spyware

(Total for Question 9 = 1 mark)

10 Which **one** of these would provide the largest storage capacity?

☒ **A** 250 megabytes

☒ **B** 5 terabytes

☒ **C** 50 kilobytes

☒ **D** 500 gigabytes

(Total for Question 10 = 1 mark)

11 Phishing is an inappropriate attempt to collect personal information from a computer user.

Identify **one** action that a computer user could take to prevent phishing.

◻ **A** Use a strong password to restrict computer access

◻ **B** Ensure anti-virus software is up-to-date

◻ **C** Do not click on links in emails from unknown sources

◻ **D** Do not download from untrustworthy sites

(Total for Question 11 = 1 mark)

12 The device used to convert an analogue telephone signal into a digital signal is:

◻ **A** a modem

◻ **B** a switch

◻ **C** an adaptor

◻ **D** a gateway

(Total for Question 12 = 1 mark)

13 Computer Aided Design (CAD) systems are widely used in industry.

One benefit of using a CAD system is that:

◻ **A** products will be produced to a consistent standard

◻ **B** changes to designs can be made easily

◻ **C** parts can be produced quickly

◻ **D** designers do not need to be trained

(Total for Question 13 = 1 mark)

14 Manufacturers rely on components being available in sufficient quantities and at the right time.

The system used to make sure that the correct components are available at the right time is:

☒ **A** logistics

☒ **B** stock control

☒ **C** project management

☒ **D** administration

(Total for Question 14 = 1 mark)

15 Students need to carry out some science experiments using a virtual environment.

This type of system is an example of:

☒ **A** ergonomics

☒ **B** simulation

☒ **C** control

☒ **D** modelling

(Total for Question 15 = 1 mark)

16 A local area network (LAN) is connected to the internet using a cable.

The network manager wants to prevent unauthorised access from the internet.

Which **one** of these would provide the best protection for the LAN?

☒ **A** Firewall

☒ **B** WPA security

☒ **C** URL filter

☒ **D** Pop up blocker

(Total for Question 16 = 1 mark)

TOTAL FOR SECTION A = 16 MARKS

SECTION B

Answer ALL questions. Write your answers in the spaces provided.

17 (a) The devices shown in the table are connected to Julian's PC.

For each device, give its name **and** tick the box to show whether it is used to input, output or both input and output data.

The first one has been done for you.

(6)

	Device Name Keyboard	
	Input	✓
	Output	
	Input and output	

	Device Name	
	Input	
	Output	
	Input and output	

	Device Name	
	Input	
	Output	
	Input and output	

	Device Name	
	Input	
	Output	
	Input and output	

(b) Julian uses other devices for input, output and storage.

(i) Give **one** device that could be used for audio input.

(1)

....

(ii) Give **one** device that could be used for audio output.

(1)

....

(iii) Give **one** type of optical storage media.

(1)

....

(iv) Julian connects a USB pen drive to his PC.

State the type of storage used by a USB pen drive.

(1)

....

(c) Devices can be connected wirelessly to Julian's PC.

Give **two** types of wireless connection that can be used to connect devices to the PC.

(2)

1 ....

....

2 ....

....

(d) Julian has a range of software installed on his PC.

These include:

- an operating system
- office productivity tools
- web authoring software
- anti-virus software.

(i) Office productivity tools and web authoring software are examples of the same type of software.

Name this type of software.

(1)

....

....

(ii) An operating system is a type of systems software.

State **one** other type of systems software.

(1)

....

....

(iii) Explain **one** reason why it is important that anti-virus software is kept up-to-date.

(2)

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(e) Julian's PC has a 2.3 GHz processor.

Explain what 2.3 GHz measures in this context.

(2)

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(f) Julian's PC has two types of memory, RAM and ROM.

The program used to start up his PC is stored in ROM.

Explain **one** reason why this program **must** be stored in ROM.

(2)

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(Total for Question 17 = 20 marks)

P 5 3 3 5 7 R A 0 1 0 2 4

18 *Shores* is a supermarket chain.

Each supermarket has several Electronic Point of Sale (EPOS) terminals.

(a) Most products have a barcode on the packaging.

(i) State the name of the device used to input data automatically from the barcode.

(1)

....

(ii) Explain **two** benefits to the **supermarket** of using the barcode.

(4)

1 ....

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....

....

2 ....

....

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(iii) Some products, such as loose items of fruit, do not have barcodes.

The operator uses a screen to select an image of the product and **also** input the quantity bought.

State the type of screen used.

(1)

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(b) Some of the EPOS terminals are self-service.

At these terminals customers input the barcode data themselves.

Explain **one** benefit to the **supermarket** of having self-service terminals.

(2)

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(c) The EPOS terminals are connected to the central server of *Shores*.

The data collected from sales is used as part of the stock control system.

Complete the table, with the numbers 2–6, to give the correct order of steps in the stock control system.

(3)

Steps	Order
Barcode input	1
Current stock calculated	
Item identified	
Current stock compared to reorder level	
One item deducted from current stock	
Information sent to database	
Order placed for new stock	7

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(d) *Shores* operates a loyalty card scheme.

Customers join the scheme by registering their personal information with *Shores*.

Shores has a legal requirement to ensure that stored personal information is accurate and up-to-date.

(i) Give **three** methods *Shores* can use to ensure that the personal information it stores is accurate and up-to-date.

(3)

Method 1

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....

Method 2

....

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Method 3

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....

(ii) State **three** other legal requirements that *Shores* must follow when storing the personal information of customers.

(3)

1 ....

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2 ....

....

3 ....

....

(Total for Question 18 = 17 marks)

19 Farihaa shares a home network with other members of her family.

The home network is connected to the internet.

(a) State the hardware device that is necessary to connect the network to the internet.

(1)

....

....

(b) The family uses a range of devices to access the home network.

State **one** piece of information that identifies a device connected to the network.

(1)

....

....

(c) Farihaa connects her laptop to the network wirelessly.

(i) Give **two** advantages of using a wireless rather than a wired connection to connect her laptop to the network.

(2)

1 ....

....

2 ....

....

(ii) Give **two** disadvantages of using a wireless rather than a wired connection to connect her laptop to the network.

(2)

1 ....

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2 ....

....

(iii) Farihaa is concerned about the security of the wireless connection.

She has been advised that encryption can be used to secure the connection.

Describe how encryption secures a wireless connection.

(2)

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(d) Farihaa would like to use her laptop to play video games.

She has been advised that having a large amount of RAM would enhance her gaming experience.

Explain why having a large amount of RAM would enhance Farihaa's gaming experience.

(4)

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P 5 3 3 5 7 R A 0 1 5 2 4

(e) Farihaa would like to watch videos on her laptop using an online service.

Farihaa can choose to download or stream the videos.

Discuss the advantages and disadvantages of downloading rather than streaming videos.

(6)

(Total for Question 19 = 18 marks)

20 *Kattatoy* is a toy retailer with stores around the UK.

Goods can be bought in store or from the company website.

(a) Mandy visits her local store to buy toys for her son.

One reason why she does this is that she is concerned about the security of her personal information when she buys goods online.

State **three** other reasons why Mandy may prefer to buy goods in store rather than online.

(3)

1 ....

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2 ....

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3 ....

....

(b) Graham finds it difficult to travel to his local store.

He prefers to buy toys for his daughter online.

(i) State **three** other reasons why Graham may prefer to buy online rather than in his local store.

(3)

1 ....

....

2 ....

....

3 ....

....

(ii) Explain **two** precautions Graham could take to reduce the risks of misuse of his personal information before buying goods online.

(4)

1 ....

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2 ....

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(c) Graham has a visual impairment.

He has used system settings to enable narrator and speech recognition facilities. This makes his computer easier to use.

Identify **two** other system settings that could be adjusted to make a computer easier to use for someone with a visual impairment.

(2)

1 ....

....

2 ....

....

(d) Graham takes regular breaks to reduce the likelihood of headaches.

Identify **two** other health problems that might arise from using a computer for long periods of time.

For each health problem, state how, **other than by taking regular breaks**, the problem can be reduced.

(4)

Problem 1

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Solution

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Problem 2

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Solution

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....

(Total for Question 20 = 16 marks)

P 5 3 3 5 7 R A 0 1 9 2 4

21 A college has several sites spread over a wide geographical area.

Students can access the college network from all sites.

A group of students, based on different sites, are working together on a research project.

Files on the network are backed up automatically, ensuring that the latest versions are available for all students working together on the research project.

(a) Explain **two** other ways the college network helps students work together on the research project.

(4)

1 ....

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2 ....

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(b) The students have set up an internet forum to discuss the project.

Identify **three** benefits of using an internet forum.

(3)

1 ....

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2 ....

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3 ....

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(c) The amount of information available online is growing on a daily basis.

Discuss the positive and negative impacts of the increased availability of information online.

(6)

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(Total for Question 21 = 13 marks)

TOTAL FOR SECTION B = 84 MARKS
TOTAL FOR PAPER = 100 MARKS

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