Write your name here

Surname		Other names

Pearson Edexcel
International GCSE

Centre Number

Candidate Number

Information and Communication Technology

Paper 1: Written Paper

Thursday 26 May 2016 – Afternoon	Paper Reference
Time: 1 hour 30 minutes	**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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PEARSON

SECTION A

Answer ALL questions.

All 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 A device used to produce a hard copy of a line drawing is a:

⊠ **A** speaker

⊠ **B** processor

⊠ **C** monitor

⊠ **D** plotter

(Total for Question 1 = 1 mark)

2 Which **one** of these is a portable device?

⊠ **A** Mainframe computer

⊠ **B** Desktop PC

⊠ **C** Laptop

⊠ **D** Super computer

(Total for Question 2 = 1 mark)

3 Spreadsheets and databases are types of:

⊠ **A** applications software

⊠ **B** operating systems

⊠ **C** system software tools

⊠ **D** storage devices

(Total for Question 3 = 1 mark)

4 The device used to measure the temperature in an oven is a:

⊠ **A** transmitter

⊠ **B** sensor

⊠ **C** modem

⊠ **D** scanner

(Total for Question 4 = 1 mark)

5 Which **one** of these symbols must be included in an email address?

☒ **A** /

☒ **B** *

☒ **C** @

☒ **D** $

(Total for Question 5 = 1 mark)

6 All devices used to input data to, or output data from, a computer are:

☒ **A** access devices

☒ **B** peripheral devices

☒ **C** communication devices

☒ **D** wireless devices

(Total for Question 6 = 1 mark)

7 A symbol used to replace missing words in a query is:

☒ **A** a wildcard

☒ **B** an operator

☒ **C** a keyword

☒ **D** an application

(Total for Question 7 = 1 mark)

8 The device used to strengthen a wireless signal is:

☒ **A** an adaptor

☒ **B** an actuator

☒ **C** a tracker

☒ **D** a booster

(Total for Question 8 = 1 mark)

9 Which **one** of these will not retain data when the computer power is turned off?

⊠ **A** Hard drive

⊠ **B** RAM

⊠ **C** Flash drive

⊠ **D** ROM

(Total for Question 9 = 1 mark)

10 Which **one** of these is the largest storage capacity?

⊠ **A** 2 TB

⊠ **B** 200 MB

⊠ **C** 500 KB

⊠ **D** 5 GB

(Total for Question 10 = 1 mark)

11 Which **one** of these terms gives the speed of a computer processor?

⊠ **A** 64-bit

⊠ **B** 2.1 GHz

⊠ **C** 3 MB cache

⊠ **D** 5400 rpm

(Total for Question 11 = 1 mark)

12 John wants to save an image of the Eiffel Tower.

The file name must be valid and allow easy retrieval.

Which **one** of these file names would be **most** appropriate?

⊠ **A** Image69624.jpg

⊠ **B** Eiffel.Tower.jpg

⊠ **C** Eiffel_Tower.jpg

⊠ **D** Image/Eiffel_Tower.jpg

(Total for Question 12 = 1 mark)

13 Supermarkets use computer systems to help them predict sales.

The use of a computer system to predict sales is:

$\boxtimes$ **A** systems analysis

$\boxtimes$ **B** stock control

$\boxtimes$ **C** logistics

$\boxtimes$ **D** simulation

(Total for Question 13 = 1 mark)

14 Which **one** of these is part of system software?

$\boxtimes$ **A** Device driver

$\boxtimes$ **B** Optical mark reader

$\boxtimes$ **C** Touch screen

$\boxtimes$ **D** Control software

(Total for Question 14 = 1 mark)

15 A school keeps a log of all modifications made to data in its database management system.

This type of log is:

$\boxtimes$ **A** a transcription log

$\boxtimes$ **B** a backup log

$\boxtimes$ **C** a transaction log

$\boxtimes$ **D** an access log

(Total for Question 15 = 1 mark)

16 Which **one** of these is an algorithm used to protect data sent over a wireless network?

$\boxtimes$ **A** WAP

$\boxtimes$ **B** VPN

$\boxtimes$ **C** WEP

$\boxtimes$ **D** PDF

(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 Jason wants to produce a slide show of the types of wild birds that are seen in his home town.

He has a laptop computer.

(a) Identify the type of software he should use to produce the slide show.

(1)

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(b) Identify the devices he could use to input text and sound to his slide show.

(i) Text

(1)

....

(ii) Sound

(1)

....

(c) Identify **two** devices he could use to output sound from his slide show.

(2)

1 ....

2 ....

(d) Jason wants to show his slides to a large group of bird watchers at a meeting.

Identify **two** additional hardware devices he could use to do this.

(2)

1 ....

2 ....

P 4 5 9 2 0 R A 0 6 2 0

(e) He uses a digital camera with wireless capability to take photographs of the birds.

He wants to print the photographs.

Identify **two** types of wireless connection he could use to send the images from his camera to a wireless printer.

(2)

1 ....

2 ....

(f) Jason has downloaded the images from his camera onto his laptop.

(i) Give **two** reasons why he should also make backup copies of the images.

(2)

1 ....

....

2 ....

....

He has decided to use removable storage media for the backup.

(ii) Identify **one** type of optical storage media that he could use.

(1)

....

(iii) Identify **one** removable device that uses flash memory.

(1)

....

(iv) Explain why a flash memory device may be more appropriate for the backup than optical storage media.

(2)

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(g) Jason often emails photographs to fellow members of the local bird watching club.

(i) Identify **one** feature of email software that will enable him to include a photograph in an email.

(1)

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He is aware that he should not share the members' email addresses.

(ii) Identify **one** way of sending an email without showing email addresses.

(1)

....

(iii) Identify **one** way of sending an email to the members without entering individual email addresses.

(1)

....

(Total for Question 17 = 18 marks)

18 *Carterase College* has a network of computers located on a single site.

The network is used by teaching staff, administrative staff and students.

(a) Name this type of computer network.

(1)

....

(b) New users are allocated usernames and passwords to allow access to the network.

When a new user logs on for the first time they are prompted to change their allocated password.

Users are advised to create a strong password.

(i) Give **two** characteristics of a strong password.

(2)

1 ....

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2 ....

....

(ii) A user creates a strong password.

Give **two** actions the user should take to keep their password secure.

(2)

1 ....

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2 ....

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(c) Teaching staff, administrative staff and students are given file access rights.

(i) Explain what is meant by file access rights.

(2)

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(ii) Give **two examples** of the impact of file access rights on the different groups of users.

(2)

1 ....

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2 ....

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(d) The college has an intranet as part of its network.

Teachers use the intranet to exchange information with students.

Identify **three other** ways teachers could use the intranet. The ways you identify should be broad areas rather than specific details.

(3)

1 ....

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2 ....

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3 ....

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(e) *Carterase College* is responsible for the health and safety of all computer users.

Furniture at all workstations has been designed to help reduce health risks.

(i) Give the name of this type of furniture.

(1)

....

(ii) Computer operator chairs are provided to help reduce backache.

Identify **two** features of the chairs that can help to reduce backache.

(2)

1 ....

....

2 ....

....

(iii) Identify **two** actions *Carterase College* could take to improve user safety at workstations.

(2)

1 ....

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2 ....

....

(f) Access to computer rooms is controlled by biometric scanners.

(i) Identify **one** biometric that can be scanned.

(1)

....

(ii) Give **one** benefit of using a biometric scanner to gain access to the rooms.

(1)

....

....

(iii) Give **one** possible drawback of using a biometric scanner to gain access to the rooms.

(1)

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(g) Students at *Carterase College* are aged between 11 and 16.

The college wants students to stay safe when using the internet.

Discuss the advice the college could give to students.

(6)

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(Total for Question 18 = 26 marks)

19 Julio is the owner of a small company selling personalised gifts.

He has decided to advertise his company on the internet.

(a) Julio intends to set up a website.

    (i) He will use web authoring software to create his website.

       The software allows pages to be written in design view or code view.

       Give **two** advantages of using design view rather than code view.

(2)

1 ....

....

2 ....

....

    (ii) Identify **two** features that Julio could include to allow potential customers to move between pages of his website.

(2)

1 ....

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2 ....

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    (iii) Julio needs to make the website available on the internet.

       Explain how **one** facility offered by an Internet Service Provider (ISP) allows him to do this.

(2)

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(b) Julio wants to encourage potential customers to view his website.

Identify **two** ways that Julio could use the internet to do this.

(2)

1 ....

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2 ....

....

(c) Julio will use his website to sell products online.

The website will have a system to store customer data.

(i) Give **three** additional features that the website must have to allow customers to buy his products.

(3)

1 ....

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2 ....

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3 ....

....

(ii) Julio must ensure that customer data is secure.

Identify the technique used to secure the data during transmission.

(1)

....

(d) Customers use an Internet Service Provider (ISP) to access the internet.

(i) State the type of software customers need to view Julio's website.

(1)

....

(ii) Identify the internet service a customer would use to find Julio's website.

(1)

....

(iii) Many ISPs block undesirable websites.

State the type of software used to block undesirable websites.

(1)

....

(Total for Question 19 = 15 marks)

20 Pat and John have created a home network to connect their PCs and printer.

(a) The diagram shows the network.

Network map of Wireless Network Connection

Pat's-PC

Printer

John's-PC

A

Internet
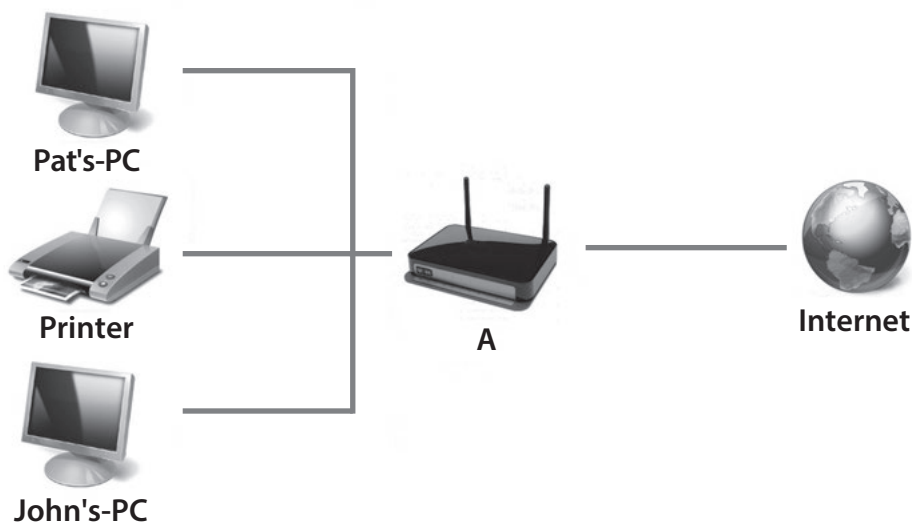
(i) One device in the diagram is labelled 'A'.

Identify the type of device labelled 'A'.

(1)

....

(ii) All devices connected to the network are identified by name.

State **one other** way a device on the network can be identified.

(1)

....

(b) Give **three** benefits to Pat and John of using their home network.

(3)

1 ....

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2 ....

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3 ....

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(c) Home networks can use both wired and wireless connection.

(i) Identify **two** advantages of using a wired rather than a wireless connection.

(2)

1 ....

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2 ....

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(ii) Identify **one** disadvantage of using a wired rather than a wireless connection.

(1)

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(d) Computers connected to the internet are at risk from malicious actions.

Identify **two** malicious actions that could result in data corruption.

For each malicious action, state how the risk can be reduced.

(4)

Malicious action 1

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How to reduce the risk

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....

Malicious action 2

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How to reduce the risk

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(Total for Question 20 = 12 marks)

21 Students often use digital sources to find information for school projects.

(a) Some reference books are available on CDs, DVDs and eReaders.

Identify **three** benefits of using digital reference books rather than traditional hard copy reference books.

(3)

1 ....

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2 ....

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3 ....

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(b) Students need to be careful about how they use information collected for school projects.

Identify **two** constraints placed on the **use of** information.

For each constraint give a method of ensuring that the information is used in an acceptable manner.

(4)

Constraint 1

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Method

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....

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Constraint 2

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Method

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(c) When undertaking a school project students can use the internet to access reference sites.

Explain the factors that a student should consider when selecting information from an internet reference site.

(6)

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(Total for Question 21 = 13 marks)

TOTAL FOR SECTION B = 84 MARKS

TOTAL FOR PAPER = 100 MARKS