

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

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Pearson Edexcel International GCSE (9–1)

Time 1 hour 30 minutes

Paper
reference

4IT1/01

Information and Communication Technology (ICT)

PAPER 1: Written Paper

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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Answer ALL questions.

Write your answers in the spaces provided.

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 ☒.

Kay works from home.
She uses ICT for business and entertainment.



(Source: © PAL)

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1 Kay uses a laptop for work.

(a) Which **one** of these features would be improved if she used a desktop replacement?

(1)

- A** User interface
- B** Energy consumption
- C** Portability
- D** Performance

(b) Which **one** of these could prevent the risk to Kay's work data caused by accidental deletion?

(1)

- A** Anti-malware
- B** Backup
- C** Encryption
- D** Phishing

(c) Kay makes copies of her work files.

One reason magnetic tape is used for this is because it can store more data than other storage media.

Explain **one other** reason magnetic tape is a good choice.

(2)

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(d) Kay often prints her work.

(i) Describe how an inkjet printer works.

(2)

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(ii) A printer has 32 MiB of cache memory.

Construct an expression to show how many bits are in 32 MiB.

(3)

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(iii) State the output device that would produce this object.



(Source: © PAL)

(1)

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(e) Draw **one** straight line from **each** characteristic to the correct hardware.

(3)

Characteristic

Hardware

Has the largest capacity ●

● Compact disc

Stores applications while they are in use ●

● Magnetic disk

Stores instructions needed to load the operating system ●

● Random access memory

● Read only memory



(f) Complete the labelling of this image of a storage device.

(3)



(i)

(ii)

(iii)

(Source: © PAL)

(g) Explain **one** benefit of increasing the size of RAM in a laptop.

(2)

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(h) Explain why print spooling is necessary.

(2)

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(Total for Question 1 = 20 marks)



2 Kay uses a range of software.

(a) State the type of utility software that prevents data from being understood without using a key.

(1)

(b) State **one** reason why data is compressed before being transferred across a network.

(1)

(c) Describe how utility software can reduce access times for large files stored on magnetic media.

(2)

(d) State **two** types of application software.

(2)

1

2

(e) Which **one** of these identifies how OMR recognises text?

(1)

- A Magnetic
- B Online
- C Optical
- D Random



(f) Describe how application software is different from systems software.

(2)

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(g) State **two** key features of a blog that are different from the key features of a website.

(2)

1

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2

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(h) Kay uses software to protect her from risks online.

(i) Which **one** of these is an example of phishing?

(1)

- A** Email pretending to be from a bank
- B** Encrypting data
- C** Redirecting web traffic to a fake site
- D** Website code copied without permission

(ii) Which **one** of these is a risk of phishing?

(1)

- A** Connectivity fault
- B** Data deletion
- C** Fraudulent activity
- D** Power reduction

(Total for Question 2 = 13 marks)



3 Kay can access goods and services online.

(a) Online transactions can be tracked.

Which **one** of these is used for transaction tracking?

(1)

- A Authentication
- B Backups
- C Cookies
- D Debit cards

(b) One type of online service is education and training.

(i) Give **one other** type of online service.

(1)

(ii) List **two** features of a virtual learning environment (VLE).

(2)

1

2

(c) Which **one** of these describes people who are 'information poor'?

(1)

- A Limited access to technology
- B Phishing victims
- C Rural communities using 4G technology
- D Write access, rather than read access



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(d) Describe **two** positive impacts of the Internet on organisations.

(4)

1

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2

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(e) Describe **two challenges** of using an acceptable behaviour policy with an online community.

(4)

1

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2

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(f) Explain **two** reasons why hosted applications are a better choice than local applications for editing graphics from a smartphone.

(4)

1

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2

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(Total for Question 3 = 17 marks)



4 Kay uses the Internet to work from home.

(a) Kay does not have to waste time travelling to work.

Describe **one other** positive impact the Internet has on how Kay works.

(2)

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(b) When Kay logs on to a browser application at home she sees the bookmarks that she saved when she was in the office.

Describe how this is made possible.

(2)

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(c) Which **one** of these is the role of an ISP?

(1)

- A** Connects webpages to intermediate servers
- B** Gives users access to the Internet
- C** Prevents security leaks of company information
- D** Sets up a portal for immediate access

(d) Complete the description of a secure password.

(2)

A secure password should use a minimum of eight and a mixture of and



(e) Kay is searching for some information online.

Describe **two** ways that Kay can make effective use of a search engine to select information.

(4)

1

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2

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(f) Kay reduces the risk of electric shock by not having uncovered drinks near her laptop.

Complete the table to show **two other** health and safety risks of using ICT and **one** method of prevention for **each** risk.

(4)

Health and safety risk	Method of prevention

(g) Which **one** of these is used to connect a local area network to a wide area network?

(1)

- A Gateway
- B Router
- C Wireless access point
- D Modem

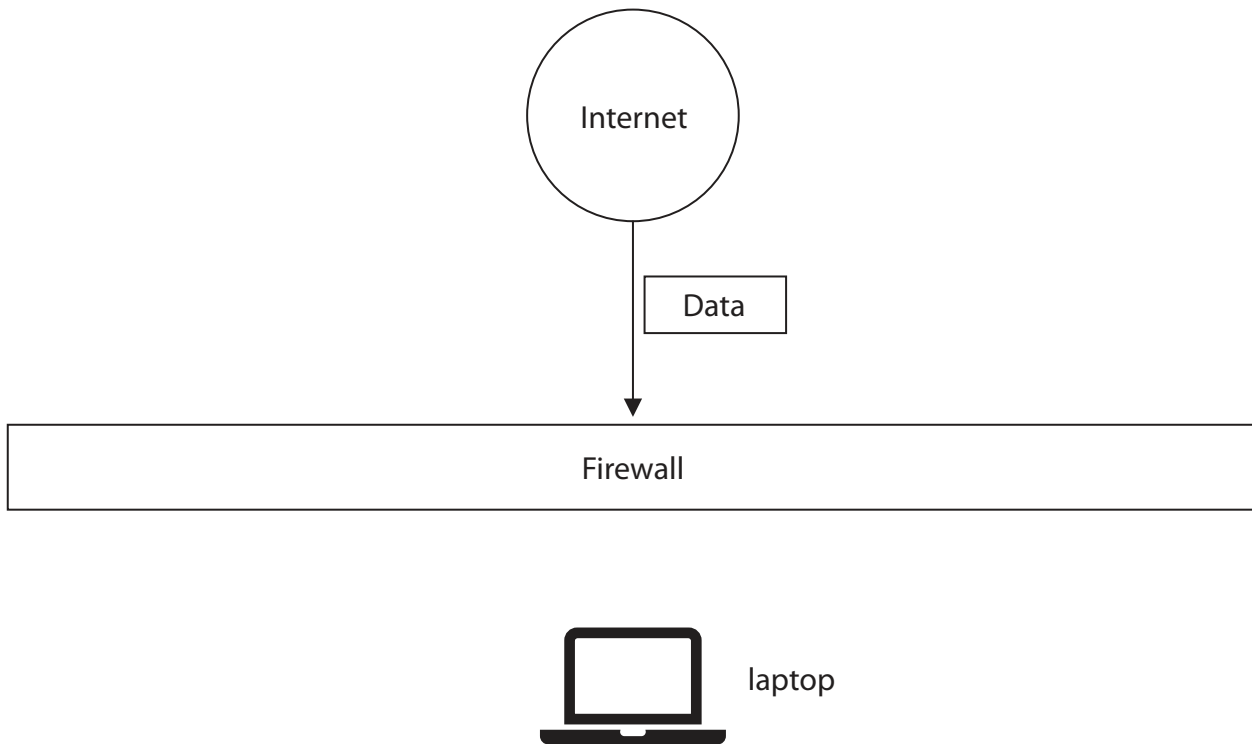


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(h) This diagram shows data sent to a laptop.



Describe how the firewall acts on the data that has been sent to the laptop.

(2)

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(i) State **two** ways devices are identified on a network.

(2)

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(j) Discuss the use of wireless and wired connectivity for a home network.

(8)

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Handwriting practice area with 15 horizontal dotted lines.

(Total for Question 4 = 28 marks)

Large blank area for writing the answer to Question 4.



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

5 Kay likes to listen to music.

(a) Kay connects her smartphone to her home entertainment system.

(i) Explain **one** advantage of connecting her smartphone to her home entertainment system.

(2)

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(ii) Give **two other** types of device that Kay could connect to her smartphone.

(2)

1

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2

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(b) Explain **one** benefit to Kay's lifestyle of being able to listen to audio streamed online, rather than downloading it.

(2)

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(c) Explain **one** drawback to musicians of sharing their music online.

(2)

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(d) Explain **one** drawback of using cloud storage to back up a digital film library. (2)

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(e) Explain **one** reason why films often appear pixelated when they first load from online streaming services. (2)

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(f) Kay is visually impaired.
List **two** ways that an ICT system can be configured to meet the needs of someone with limited eyesight. (2)

1

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2

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(g) Evaluate the choices society must make between the expanding use of ICT and the need to protect the environment.

(8)

Area with horizontal dotted lines for writing the answer.

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Handwriting practice area with 12 horizontal dotted lines.

(Total for Question 5 = 22 marks)

TOTAL FOR PAPER = 100 MARKS



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