

Please check the examination details below before entering your candidate information

Candidate surname

Other names

**Pearson Edexcel**  
**International GCSE (9–1)**

Centre Number

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Candidate Number

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**Monday 11 May 2020**

Morning (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 ☒.

Sachini and Ashan have two children, Kasuni and Deshan.  
They use digital devices in their daily lives.



(Source: © Pearson Asset Library)

1 Sachini shops online for a new laptop.

(a) Give **two** advantages of shopping online rather than on the high street.

(2)

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2 .....

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(b) Which **one** of these uses magnetic media?

(1)

- ☐ A Solid state disc
- ☐ B Flash disc
- ☐ C Hard disc
- ☐ D Optical disc

(c) Sachini cannot access Wi-Fi.

Name **one** type of mobile phone connectivity that Sachini could use to access the Internet.

(1)

(d) The amount of RAM in a computer can be increased.

(i) Explain **one** benefit to the user of increasing the amount of RAM.

(3)

Benefit

Explanation

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(ii) One characteristic of RAM is that it can be increased.

Describe how **two other** characteristics of RAM and ROM affect their use.

(4)

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2 .....

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(e) Sachini chooses to recycle her old laptop.

Describe **two** ways in which the improper disposal of digital devices could be harmful to human health.

(4)

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(f) Which **one** of these is a type of storage media?

(1)

- ☐ A CD drive
- ☐ B Magnetic tape
- ☐ C RAM
- ☐ D SSD

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(g) The laptop can store 128 GiB of data.

Construct an expression to show how many bits are in 128 GiB.

(3)

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(h) Some people cannot go online because of their religious beliefs.

List **two other** causes of unequal access to ICT.

(2)

1.....

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(Total for Question 1 = 21 marks)



2 Sachini plays online games on her laptop.

(a) List **two** ways Sachini can reduce the risk of developing repetitive strain injury (RSI).

(2)

1 .....

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2 .....

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(b) The laptop has a built-in keyboard and mouse.

Draw a diagram to show how Sachini can connect **two other** devices to the laptop that will enable her to control a game.

Label each device and the connectivity you use in your diagram.

(3)



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- (c) Sachini creates a personal area network (PAN) with her laptop and her smartphone.

Describe **one** way that Sachini could use a PAN with these devices.

(2)

- (d) Describe the function of a web browser.

(2)

- (e) Describe how Sachini can update the game software.

(2)

- (f) Give **two** reasons why Sachini should update the game software.

(2)

1 .....

2 .....



(g) The game is stored on a DVD-R.

Explain why the game does not require rewritable optical storage media.

(2)

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(h) The laptop uses a fingerprint scanner.

Which **one** of these describes this device?

(1)

- ☐ **A** Media support
- ☐ **B** Expansion capability
- ☐ **C** Security feature
- ☐ **D** Storage

(Total for Question 2 = 16 marks)





3 Ashan works in an office with a network.

(a) He uses his smartphone to make an online video call.

(i) Which **one** of these does Ashan need to do this?

(1)

☐ A WAN

☐ B WEP

☐ C WPA

☐ D WAP

(ii) Describe how high latency affects his experience of the video call.

(2)

(iii) State **three** ways in which latency can be reduced.

(3)

1 .....

2 .....

3 .....

(b) State the role of an ISP.

(1)

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(c) State the function of a gateway.

(1)

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(d) Describe **two** benefits of using a client–server network.

(4)

Benefit 1 .....

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Benefit 2 .....

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(e) Which **one** of these is a method of identifying a computer on a network?

(1)

- ☐ A HTTP
- ☐ B WEP
- ☐ C FTP
- ☐ D IP

(f) Which **one** of these is a feature of a media access control address?

(1)

- ☐ A It directs protocols
- ☐ B It is unique
- ☐ C It has to be entered into a web browser
- ☐ D It encrypts downloads



- (g) Ashan tells Sachini that her smartphone will not be able to use her location as she is not connected to the Internet.

State the reason why Ashan is wrong.

(1)

- (h) Ashan needs to print some documents.

Explain **two** ways an inkjet printer performs differently to a laser printer.

(4)

1 .....

2 .....

(Total for Question 3 = 19 marks)



4 Kasuni studies online.

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(a) Which **one** of these is a user-generated reference site?

(1)

- ☐ A Social network
- ☐ B Wiki
- ☐ C VLE
- ☐ D Online work space

(b) Which **one** of these is a method Kasuni could use to avoid plagiarising content?

(1)

- ☐ A Bias check
- ☐ B Copy and paste
- ☐ C Paraphrasing
- ☐ D Efficient search

(c) Describe how the key features of social bookmarking could be used by students completing a research project.

(4)

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(d) Some teachers use OMR to reduce their workload when marking tests.

Describe how OMR works.

(2)

(e) Schools must comply with data protection laws.

Explain why teachers should use a VPN to access files on school servers.

(2)

(f) Kasuni needs to submit her project file online.

Explain why Kasuni compresses her file before uploading it.

(2)

(g) Which **one** of these is a type of software used to compress files.

(1)

- ☐ A Backup
- ☐ B Utility
- ☐ C Security
- ☐ D Network





(h) Discuss the impact of transaction tracking on the information that individuals see online.

(8)

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(Total for Question 4 = 21 marks)



5 Deshan buys a music CD in a store.

(a) Deshan pays with a card using NFC.

Explain why NFC speeds up the payment process.

(2)

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(b) The CD comes with access to a music streaming service.

Describe how streaming works.

(4)

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- (c) Describe how the amount of bandwidth available affects Deshan's experience of streaming.

(3)

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- (d) The payment system uses an open source operating system.

- (i) State what is meant by the term 'open source software'.

(2)

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- (ii) State **two** functions of an operating system.

(2)

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(e) Online hackers are a threat to Deshan's data.

List **two other** threats to Deshan's data.

(2)

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(f) Evaluate the tools that are available to help individuals stay safe online.

(8)

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(Total for Question 5 = 23 marks)

**TOTAL FOR PAPER = 100 MARKS**





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