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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel International GCSE (9–1)

Centre Number | Candidate Number

Monday 11 May 2020

Morning (Time: 1 hour 30 minutes) | Paper Reference **4IT1/01R**

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 on the high street rather than online.

(2)

1 .....

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2 .....

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(b) Which **one** of these uses a laser to write to the media?

(1)

- ☒ **A** Solid state disc
- ☒ **B** Flash disc
- ☒ **C** Hard disc
- ☒ **D** Optical disc

(c) Sachini cannot access Wi-Fi.

Which **one** of these is a type of mobile phone connectivity that Sachini could use to access the Internet?

(1)

- ☒ **A** WLAN
- ☒ **B** GPS
- ☒ **C** PAN
- ☒ **D** GSM

(d) Describe how **two** characteristics of flash memory affect its use.

(4)

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(e) Explain **one** negative impact on the user of decreasing the amount of RAM.

(3)

Negative impact

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Explanation

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(f) Sachini chooses to recycle her old laptop.

Explain **two** ways to dispose of digital devices that would reduce the risk of harm to human health.

(4)

1 .....

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2 .....

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

(1)

☒ **A** CD-ROM

☒ **B** Hard drive

☒ **C** RAM

☒ **D** SSD

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(h) The laptop can store 64 GiB of data.

Construct an expression to show how many bits are in 64 GiB.

(3)

(i) Some people cannot afford to go online.

List **two** effects of reduced access to ICT.

(2)

1 .....

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2 .....

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(Total for Question 1 = 21 marks)

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2 Sachini plays online games on her laptop.

(a) List **two** ways in which Sachini is at risk of developing repetitive strain injury (RSI).

(2)

1 .....

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2 .....

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(b) Draw a diagram to show how Sachini can connect her laptop to the Internet.

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

(2)



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(c) Sachini connects her laptop to a local area network (LAN).

Describe **two** benefits of doing this.

(4)

1 .....

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(d) Describe the function of a search engine.

(2)

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(e) Each time Sachini plays a game on her laptop, she updates the game software.

Explain **two** reasons why Sachini should update the game software.

(4)

1 .....

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2 .....

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(f) Describe **one** risk to Sachini's system of updating the game software.

(2)

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(g) The laptop uses an SD card reader.

Which **one** of these does this device provide?

(1)

☒ **A** Media support

☒ **B** Expansion capability

☒ **C** Security

☒ **D** Connectivity

(Total for Question 2 = 17 marks)

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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 protects his data?

(1)

☒ **A** WAN

☒ **B** WMA

☒ **C** WPA

☒ **D** WAP

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

(2)

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(iii) State **three** ways that latency can be increased.

(3)

1 .....

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2 .....

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3 .....

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(b) Describe the function of a file server.

(2)

(c) Describe **two** drawbacks of using a peer-peer network.

(4)

Drawback 1

Drawback 2

(d) A computer's media access control (MAC) address can be used to identify it on a network.

State **one other** way of identifying a computer on a network.

(1)

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

(1)

☒ **A** It is fixed

☒ **B** It must be changed regularly

☒ **C** It is secure

☒ **D** It is part of an IP address

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(f) Ashan tells Sachini that her smartphone will be able to use her location even if she is not connected to the Internet.

State why Ashan is correct.

(1)

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.....

(g) An inkjet printer forms an image on a page by spraying ink through a nozzle.

Describe how a laser printer forms an image on a page.

(2)

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(Total for Question 3 = 17 marks)

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4 Kasuni studies online.

(a) State **one** type of user-generated reference site that Kasuni could use for her studies.

(1)

(b) State what is meant by the term 'plagiarism'.

(1)

(c) Describe how the key features of a virtual learning environment (VLE) could be used by students completing a research project.

(4)

(d) Some teachers use OMR.

Which **one** of these is an example of the use of OMR?

(1)

☒ **A** Setting assignments

☒ **B** Doing research

☒ **C** Backing up work

☒ **D** Taking registers

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(e) Describe how a VPN works.

(3)

(f) Kasuni creates a password for her student account.
Her password contains letters and numbers.

State **two other** features of a strong password.

(2)

1 .....

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2 .....

.....

(g) Which **one** of these is a type of software used to encrypt files?

(1)

☒ **A** Backup

☒ **B** Utility

☒ **C** Update

☒ **D** Network

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(h) Discuss how the availability of goods and services online could affect Sachini's lifestyle.

(8)

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(Total for Question 4 = 21 marks)

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5 Deshan buys a computer game.

(a) Deshan pays with a card using NFC.

Explain the risk to Deshan of using NFC.

(2)

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

Explain **two** reasons why the game software may require access to the hard drive.

(4)

1

2

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(c) Describe how the speed of the processor affects Deshan's experience of gaming.

(4)

(d) The payment system uses a proprietary operating system.

(i) State what is meant by the term 'proprietary software'.

(2)

(ii) Describe how operating systems use memory management.

(2)

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(e) Malware is a threat to Deshan's data.

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

(2)

1 .....

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2 .....

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(f) Deshan makes his own digital games.

Discuss how copyright legislation affects how Deshan uses digital media to make a game.

(8)

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(Total for Question 5 = 24 marks)

TOTAL FOR PAPER = 100 MARKS

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