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 ▶

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 ....

....

2 ....

....

(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)

1 ....

....

....

....

2 ....

....

....

....

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

(3)

Negative impact

....

....

Explanation

....

....

....

....

(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...

....

....

....

2...

....

....

....

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

(1)

☒ **A** CD-ROM

☒ **B** Hard drive

☒ **C** RAM

☒ **D** SSD

(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 ....

....

2 ....

....

(Total for Question 1 = 21 marks)

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 ....

....

2 ....

....

(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)

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

Describe **two** benefits of doing this.

(4)

1 ....

....

....

....

2 ....

....

....

....

(d) Describe the function of a search engine.

(2)

....

....

....

....

(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 ....

....

....

....

2 ....

....

....

....

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

(2)

....

....

....

....

(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)

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)

....

....

....

....

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

(3)

1 ....

....

2 ....

....

3 ....

....

(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

(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)

....

....

(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)

....

....

....

....

....

(Total for Question 3 = 17 marks)

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

(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 ....

....

2 ....

....

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

(1)

☒ **A** Backup

☒ **B** Utility

☒ **C** Update

☒ **D** Network

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

(8)

....

....

....

....

....

....

....

(Total for Question 4 = 21 marks)

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 ....

....

....

....

(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)

....

....

....

....

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

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

(2)

1 ....

....

2 ....

....

(f) Deshan makes his own digital games.

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

(8)

(Total for Question 5 = 24 marks)

TOTAL FOR PAPER = 100 MARKS

BLANK PAGE