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 13 May 2019

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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Pearson

LIVEWORKSHEETS

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 ☒.

(Source: © Pearson Asset Library)

1 Kiki buys a smartphone.

(a) The smartphone uses a sensor that detects movement of the device.

One way in which the smartphone uses data from the sensor is to switch itself off if dropped.

Give **two other** ways in which the smartphone could use data from the sensor.

(2)

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LIVEWORKSHEETS

(b) Smartphones can be connected using wired or wireless methods.

(i) Give **two** advantages to Kiki of using a **wired** method to connect to the smartphone.

(2)

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2 .....

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(ii) Give **two** advantages to Kiki of using a **wireless** method to connect to the smartphone.

(2)

1 .....

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2 .....

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(c) The smartphone uses a SIM card.

Which **one** of these is a type of connectivity that the SIM card provides?

(1)

- ☒ **A** WLAN
- ☒ **B** Bluetooth
- ☒ **C** Infrared
- ☒ **D** 4G

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LIVEWORKSHEETS

(d) Kiki meets her friend, Zara.

(i) Draw a diagram to show how Kiki's smartphone can be used to provide Zara's tablet computer with an Internet connection.

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

(4)

(ii) Explain why sharing an Internet connection would affect the bandwidth available to Kiki's smartphone.

(2)

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(e) Kiki's smartphone and Zara's tablet computer share a lot of the same functionality.

State the term used to describe this.

(1)

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LIVEWORKSHEETS

(f) The smartphone has a 4 GHz CPU.

Describe the function of a CPU.

(2)

(g) The smartphone uses application software.

Describe the purpose of application software.

(2)

(h) Explain **one** benefit of using solid state storage with a smartphone.

(2)

(i) Kiki's smartphone uses an open source operating system.

Which **one** of these describes the source code in an open source operating system?

(1)

- ☒ **A** It is owned by a company
- ☒ **B** It is made available to users
- ☒ **C** It is more secure
- ☒ **D** It uses less processing power

(Total for Question 1 = 21 marks)

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LIVEWORKSHEETS

2 Zara uses her tablet computer to watch TV online.

(a) Describe the function of a router.

(2)

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(b) State **two** benefits to Zara of online TV.

(2)

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LIVEWORKSHEETS

(c) Zara streams an online video. She sees the notice shown in **Figure 1**.

Figure 1

Describe what has happened to Zara.

(4)

(d) Give **two** benefits to Zara of connecting her tablet computer to her television.

(2)

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LIVEWORKSHEETS

(e) Zara uses a PIN to unlock her tablet computer.

List **three other** methods she could use to prevent unauthorised access to her data.

(3)

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(f) Explain **one** advantage of using hosted applications with tablet computers.

(2)

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(g) Explain **one** advantage of using locally installed applications.

(2)

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(Total for Question 2 = 17 marks)

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LIVEWORKSHEETS

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3 Ruwan uses a smartwatch when he exercises.

(a) The smartwatch can connect to a Bluetooth health monitor.

Which **one** of these describes Bluetooth?

(1)

- ☒ **A** A high speed wired connection
- ☒ **B** A high resolution connection
- ☒ **C** A type of wireless connection
- ☒ **D** An energy saving connection

(b) The health monitor uses Bluetooth to transfer data to the smartwatch.

(i) Explain why Bluetooth rather than infrared is used for this transfer.

(2)

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(ii) Give **two** factors that might affect the speed of the transfer.

(2)

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(c) Some data needs to be encrypted when it is transferred.

Describe how encryption helps keep data secure.

(2)

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LIVEWORKSHEETS

(d) Ruwan's smartwatch uses GPS to monitor his location.

Give **two** pieces of information that could be calculated using GPS data.

(2)

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(e) Some social networking services use GPS data.

Describe how the use of GPS data could place social network users at risk.

(2)

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(f) The health monitor stores 4 MiB of data.

Construct an expression to show how many bits are in 4 MiB.

(3)

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LIVEWORKSHEETS

(g) Ruwan purchased his smartwatch online.

Describe **two** ways in which the Internet can impact positively on companies that sell goods.

(4)

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(Total for Question 3 = 18 marks)

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LIVEWORKSHEETS

4 Ruwan searches online for local sporting events.

(a) Ruwan evaluates the fitness for purpose of the search results.

(i) Complete this table to show how each property can **negatively** affect the fitness for purpose of information.

(3)

Property	Negative effect
Bias	
Age	
Reliability	

(ii) Which **one** of these is another property of information that affects fitness for purpose?

(1)

- ☒ **A** Cost
- ☒ **B** Keyword
- ☒ **C** Plagiarism
- ☒ **D** Relevance

(iii) Which **one** of these would improve the ranking of a search result?

(1)

- ☒ **A** Acknowledged sources
- ☒ **B** Alphabetical search terms
- ☒ **C** Copyrighted material
- ☒ **D** Sponsored adverts

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LIVEWORKSHEETS

(b) Explain why Ruwan must consider his use of keywords when using a search engine.

(2)

(c) Zara enters the same search term as Ruwan but receives different results.

Explain why Zara receives different results.

(2)

(d) Which **one** of these is a protocol used to transfer data on the Internet?

(1)

- ☒ **A** ISP
- ☒ **B** HTTPS
- ☒ **C** HTML
- ☒ **D** VPN

(e) Describe how MAC addresses can be used to prevent access to networks.

(3)

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LIVEWORKSHEETS

(f) Analyse how the use of cloud-based services has impacted on the gap between the information rich and the information poor.

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LIVEWORKSHEETS

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(Total for Question 4 = 21 marks)

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LIVEWORKSHEETS