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 **4IT1/01R**

Information and Communication Technology

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

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 turns itself off when it is dropped.

Describe how the smartphone does this.

(2)

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

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

(2)

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

(2)

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(c) The smartphone uses an SD card.

Which **one** of these does an SD card provide?

(1)

- ☒ **A** Location data
- ☒ **B** Connectivity
- ☒ **C** Storage
- ☒ **D** Security

(d) The smartphone is an example of a converged device.

State what is meant by the term 'convergence'.

(1)

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(e) The smartphone has a 4 GHz CPU.

Describe how the speed of the processor is measured.

(2)

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(f) The smartphone uses utility software.

State **two** uses for utility software.

(2)

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(g) Explain **one** drawback of using solid state storage.

(2)

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(h) Kiki's smartphone uses an operating system.

Which **one** of these describes an operating system?

(1)

- ☒ **A** It is more secure than application software
- ☒ **B** It is controlled by software
- ☒ **C** It manages memory and resources
- ☒ **D** It provides open source code

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(i) Kiki watches broadcast television.

Draw a diagram to show how Kiki's television can receive a television broadcast.

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

(4)

(j) Describe how interference could affect Kiki's experience of watching broadcast television.

(2)

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(Total for Question 1 = 21 marks)

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2 Zara uses her tablet computer to watch TV online.

(a) Describe the function of a gateway.

(2)

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

(2)

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(c) Zara sees the page shown in **Figure 1**.

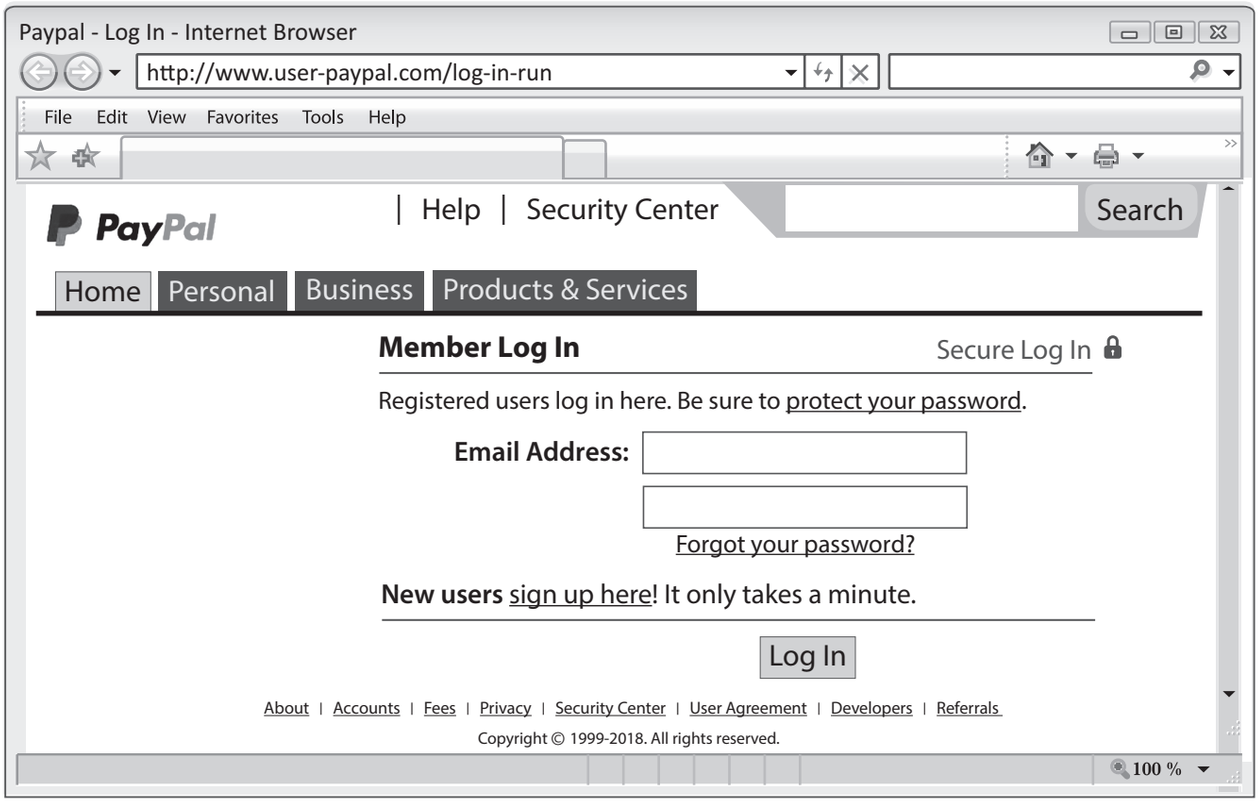

Figure 1

Describe how this page is a risk to Zara.

(4)

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

(2)

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

Describe how a PIN system works.

(3)

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(f) Explain **one** disadvantage of using hosted applications.

(2)

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

(2)

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(Total for Question 2 = 17 marks)

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3 Ruwan uses a smartwatch when he exercises.

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

Which **one** of these is a type of wireless connectivity?

(1)

- ☒ **A** Serial
- ☒ **B** Parallel
- ☒ **C** Thunderbolt
- ☒ **D** Bluetooth

(b) The health monitor uses Wi-Fi Direct to transfer data to the smartwatch.

(i) Speed is not a concern. Explain why Wi-Fi Direct is a better choice than infrared for this transfer.

(2)

(ii) Explain why distance might affect the speed of the transfer.

(2)

(c) Some data is encrypted.

Describe the purpose of encryption.

(2)

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(d) Ruwan's smartwatch uses GPS.

Describe how GPS works.

(2)

(e) Some social networking services use GPS data.

Give **two** positive ways in which social network services use GPS data.

(2)

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(f) The health monitor stores 3 KiB of data.

Construct an expression to show how many bits are in 3 KiB.

(3)

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(g) Ruwan purchased his smartwatch online.

Describe **two** ways in which transactional data could be used during a purchase.

(4)

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(Total for Question 3 = 18 marks)

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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 **positively** affect the fitness for purpose of information.

(3)

Property	**Positive effect**
Relevance	
Age	
Reliability	

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

(1)

- ☒ **A** Bias
- ☒ **B** Plagiarism
- ☒ **C** Cost
- ☒ **D** Location

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

(1)

- ☒ **A** Keywords
- ☒ **B** Copyright
- ☒ **C** Accessibility
- ☒ **D** Bookmarks

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(b) Describe how a search engine works.

(4)

(c) Which **one** of these is used as a payment method?

(1)

- ☒ **A** FTP
- ☒ **B** HTTP
- ☒ **C** NFC
- ☒ **D** VPN

(d) Describe how a firewall can be used to restrict access to a network.

(3)

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(e) Discuss how having less-restricted access to networks has impacted upon society.

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5 James teaches in a school that uses a local area network and a wide area network.

(a) State what is meant by the term 'wide area network'.

(1)

(b) Some learners have accessibility needs.

Describe **one** way that ICT systems can be configured to support learners with accessibility needs.

(4)

(c) Explain why roaming profiles could benefit teachers.

(4)

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(d) Which **one** of these is a benefit of using a client-server network?

(1)

- ☒ **A** Reduced network traffic
- ☒ **B** Faster data transfer
- ☒ **C** Higher bandwidth
- ☒ **D** Centralised backup

(e) Describe how the victims of cyber-bullying are affected by the anonymity of offenders.

(3)

(f) The learners use office productivity tools.

Give **two** examples of tasks that could be completed using office productivity tools.

(2)

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(g) Discuss the impact of wikis on learning.

(8)

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(Total for Question 5 = 23 marks)

TOTAL FOR PAPER = 100 MARKS

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