GradeMax

Please check the examination details below before entering your candidate information

Candidate surname | Other names

Centre Number | Candidate Number

Pearson Edexcel International GCSE (9–1)

Thursday 7 November 2024

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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4IT1 | 2024 | October/November | Paper 1 | GradeMax

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 ☒.

Jan, Taylor, Peta and Stevie are a family that uses digital devices at home and at work.

(Source: © Pearson Asset Library)

1 Jan buys a new computer.

(a) Which **one** of these is used by all computers?

(1)

☒ **A** Connectivity

☒ **B** Keyboard

☒ **C** Mouse

☒ **D** Processor

(b) Which **one** of these is a wireless connection method?

(1)

☒ **A** ISP

☒ **B** LAN

☒ **C** NFC

☒ **D** WAN

(c) A computer can be connected to a local area network (LAN).

Give **two other** types of network a computer can connect to.

(2)

1 ....

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2 ....

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(d) Give **two** types of internal storage media that a computer can use.

(2)

1 ....

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2 ....

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(e) Which **one** of these is a portable computer?

(1)

☒ **A** Desktop

☒ **B** Desktop replacement

☒ **C** Mainframe

☒ **D** Server

(f) Describe how 4G allows people to work from anywhere.

(2)

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(g) A Solid State Drive (SSD) has 2 TiB of storage.

Construct an expression to show how many bits are in 2 TiB.

(3)

> *Use this space for workings out.*

Expression:

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DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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(h) Jan sells an old server to Chris.

(i) Give the term used for a computer logged on to a server.

(1)

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(ii) Connecting computers to a server allows users to access data from any device.

Explain **one other** benefit of connecting computers to a server.

(2)

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(iii) Describe **two** factors that affect the speed that data is transferred on a network.

(4)

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(iv) Explain **one** benefit to the environment of reusing devices.

(2)

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(Total for Question 1 = 21 marks)

2 Taylor installs some software.

(a) Draw **one** straight line from **each** example of utility software to the correct purpose.

(3)

Utility software	Purpose

Reorder data

Formatting

Create copies of files

Encryption

Reduce file sizes

Protect data

Defragmentation

Set the file system

(b) Which **one** of these could be hosted software?

(1)

☒ **A** Application

☒ **B** Control

☒ **C** Memory management

☒ **D** Utility

(c) Explain why an operating system uses resource management when Taylor loads the software.

(2)

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(d) Explain the advantage of using open source software rather than proprietary software.

(2)

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(e) Give **two** ways of staying safe when using social networks.

(2)

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(f) Which **one** of these statements is true?

(1)

- ☒ **A** 4G uses a landline network

- ☒ **B** Bluetooth and GPS have latency

- ☒ **C** Infra-red connectivity produces heat

- ☒ **D** NFC uses Wi-Fi

(g) Taylor accepts cookies.

(i) Give **two** examples of data held in a tracking cookie.

(2)

1 ....

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2 ....

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(ii) Explain why the use of cookies can limit information shown to users.

(2)

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(iii) Which **one** of these is a requirement when storing data about individuals?

(1)

⊠ **A** Allow access to the data from anywhere

⊠ **B** Share the data with other organisations

⊠ **C** Store the data forever

⊠ **D** Use the data for limited purposes

(Total for Question 2 = 16 marks)

3 Peta studies online.

(a) Peta provides 'read/write' access to all documents.

Give **one** drawback of doing this.

(1)

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(b) Describe how a firewall prevents malware from being sent to devices in a network.

(2)

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(c) Which **one** of these technologies is used to provide Wi-Fi connectivity?

(1)

⊠ **A** 3G

⊠ **B** Copper cable

⊠ **C** Radio waves

⊠ **D** WAN

(d) Which **one** of these is a benefit of using wireless connectivity?

(1)

⊠ **A** Devices can be more portable

⊠ **B** New devices can be added

⊠ **C** Provides unlimited connections

⊠ **D** Reduces interference

(e) The Internet has improved access to information.

(i) Which **one** of these is an example of a user-generated content site?

(1)

☒ **A** Online game

☒ **B** Search engine

☒ **C** Social network

☒ **D** Wiki

(ii) Explain **one** drawback to Peta of gathering information from a user-generated reference site.

(2)

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(iii) Describe **two** features of a virtual learning environment (VLE) that can be used to help students learn.

(4)

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(iv) Explain **one** reason why Peta paraphrases the information found during research for an essay.

(2)

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(v) Explain **one** impact of unequal access to information.

(2)

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(f) Peta makes a video call to another student.

(i) Give **two** output devices required to make a video call.

(2)

1 ....

2 ....

(ii) Explain **one** benefit to Peta of increasing bandwidth.

(2)

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(g) Copper cable can be used to transmit data.

Explain why using cable that is wrapped in a thin sheet of metal increases transmission speed.

(2)

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(Total for Question 3 = 22 marks)

4 Stevie's company creates graphics to share online.

(a) Give **two** benefits to the company of sharing digital products online.

(2)

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(b) Stevie uses solid state drives and hard disk drives with image editing software.

(i) Explain the benefit of using magnetic storage rather than solid state storage.

(2)

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(ii) Explain the benefit of increased RAM when editing images.

(2)

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(c) Give **two** key features of image editing software that Stevie could use to edit a photograph.

(2)

1 ....

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(d) Explain **one** reason why copyright legislation cannot always protect the rights of digital media producers.

(2)

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(e) Stevie sells digital images.

Discuss the advantages and disadvantages to customers who use digital payment systems.

In your answer, you should consider:

• Third-party payment systems

• Bank cards

• Contactless payment using NFC

• Payment protection systems.

(8)

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(Total for Question 4 = 18 marks)

5 Stevie creates a website.

(a) Describe **one** way website content can be optimised to reduce the bandwidth requirements of users.

(2)

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(b) Stevie adds music to the website.

Describe **one** way that streaming music differs from downloading music.

(2)

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(c) Explain **one** benefit to companies of using targeted advertising.

(2)

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(d) Describe how transaction logs improve the security of Stevie's data.

(2)

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(e) Stevie uses hosted software.

The software can be accessed from low-performance devices.

(i) Give **two other** benefits of hosted software.

(2)

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(ii) Which **one** of these is the reason hosted software can be used from low-performance devices?

(1)

☒ **A** Application servers do the processing

☒ **B** Bandwidth is improved

☒ **C** Faster access to storage

☒ **D** Latency is higher

(f) Describe **two** functions of a network operating system.

(4)

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(g) 'The increased availability of digital devices has had a positive impact on how people use their free time.'

Justify this statement.

(8)

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(Total for Question 5 = 23 marks)

TOTAL FOR PAPER = 100 MARKS