Write your name here

Surname		Other names

Pearson Edexcel International GCSE

Centre Number

Candidate Number

Information and Communication Technology

Paper 1: Written Paper

Wednesday 17 May 2017 – Morning
Time: 1 hour 30 minutes

Paper Reference
4IT0/01

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.

P48159RA
©2017 Pearson Education Ltd.
1/1/1/1/1/e2/1

P48159RA0124

Turn over ▶

Pearson

Section A

Answer ALL questions.

All 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 ☒.

1 A tracker ball is a type of:

☒ **A** input device

☒ **B** processing device

☒ **C** output device

☒ **D** storage device

(Total for Question 1 = 1 mark)

2 The most appropriate type of software to use for calculations is:

☒ **A** word processing

☒ **B** spreadsheet

☒ **C** presentation

☒ **D** audio editing

(Total for Question 2 = 1 mark)

3 Which **one** of these is a data input device?

☒ **A** ROM

☒ **B** WAN

☒ **C** OMR

☒ **D** VPN

(Total for Question 3 = 1 mark)

4 Which **one** of these is needed for internet access?

☒ **A** OCR

☒ **B** PIN

☒ **C** JPG

☒ **D** ISP

(Total for Question 4 = 1 mark)

5 Which **one** of these uses an optical method of data storage?

⊠ **A** Hard disk

⊠ **B** CD

⊠ **C** Magnetic tape

⊠ **D** USB stick

(Total for Question 5 = 1 mark)

6 A control system is used to maintain the temperature in a fridge.

The device used to measure the temperature is a type of:

⊠ **A** sensor

⊠ **B** monitor

⊠ **C** scanner

⊠ **D** plotter

(Total for Question 6 = 1 mark)

7 Many colleges restrict the websites that students may access.

The type of software used to do this is:

⊠ **A** filter software

⊠ **B** editing software

⊠ **C** communication software

⊠ **D** web authoring software

(Total for Question 7 = 1 mark)

8 **One** factor that should be considered before installing a software update is:

⊠ **A** mouse settings

⊠ **B** validation rules

⊠ **C** compatibility

⊠ **D** portability

(Total for Question 8 = 1 mark)

9 The ICT system used to plan, implement and control the movement and delivery of goods is:

☒ **A** stock control

☒ **B** simulation

☒ **C** communication

☒ **D** logistics

(Total for Question 9 = 1 mark)

10 An internal hard disk is a type of:

☒ **A** processor

☒ **B** primary storage

☒ **C** secondary storage

☒ **D** operating system

(Total for Question 10 = 1 mark)

11 Products sold in supermarkets have barcodes.

The information contained in the barcode is the:

☒ **A** product number

☒ **B** product price

☒ **C** supermarket name

☒ **D** date of manufacture

(Total for Question 11 = 1 mark)

12 Which **one** of these is used to link two networks?

☒ **A** Modem

☒ **B** Booster

☒ **C** Browser

☒ **D** Gateway

(Total for Question 12 = 1 mark)

13 Computer Aided Manufacturing (CAM) systems are widely used in industry.

One benefit of CAM is that:

☒ **A**   the machinery does not require maintenance

☒ **B**   all production costs are reduced

☒ **C**   the quality of items produced is more consistent

☒ **D**   there will be less industrial pollution

(Total for Question 13 = 1 mark)

14 A company needs to back up the data on its network.

Factors that should be considered when creating a backup system are:

☒ **A**   amount of RAM, amount of data and time of backup

☒ **B**   media to use, amount of data and frequency of backup

☒ **C**   media to use, type of data and time of backup

☒ **D**   amount of RAM, type of data and frequency of backup

(Total for Question 14 = 1 mark)

15 Many companies have intranets.

Which **one** of these **best** describes an intranet?

☒ **A**   A private network, which uses internet protocols, accessible by all visitors to an organisation's website

☒ **B**   A public network, which uses internet protocols, accessible by all visitors to an organisation's website

☒ **C**   A private network, which uses internet protocols, accessible by employees of an organisation

☒ **D**   A private network, which does not use internet protocols, accessible by employees of an organisation

(Total for Question 15 = 1 mark)

16 A company uses a database to store staff details.

The manager wants a list of accountants and engineers who earn at least £40,000.

Which **one** of these would produce the required list?

⊠ **A** JOB = "accountant" AND JOB = "engineer" AND SALARY >= £40,000

⊠ **B** JOB = "accountant" OR JOB = "engineer" AND SALARY > £40,000

⊠ **C** JOB = "accountant" AND JOB = "engineer" AND SALARY < £40,000

⊠ **D** JOB = "accountant" OR JOB = "engineer" AND SALARY >= £40,000

(Total for Question 16 = 1 mark)

TOTAL FOR SECTION A = 16 MARKS

SECTION B

Answer ALL questions. Write your answers in the spaces provided.

17 (a) Amanda has a PC.

The table shows a list of components that form part of Amanda's PC system.

For each component put a cross in the correct box to indicate whether the component is used for input, output or storage.

(6)

	Input	**Output**	**Storage**
Speaker	☒	☒	☒
Mouse	☒	☒	☒
Flash memory	☒	☒	☒
Webcam	☒	☒	☒
DVD	☒	☒	☒
Data projector	☒	☒	☒
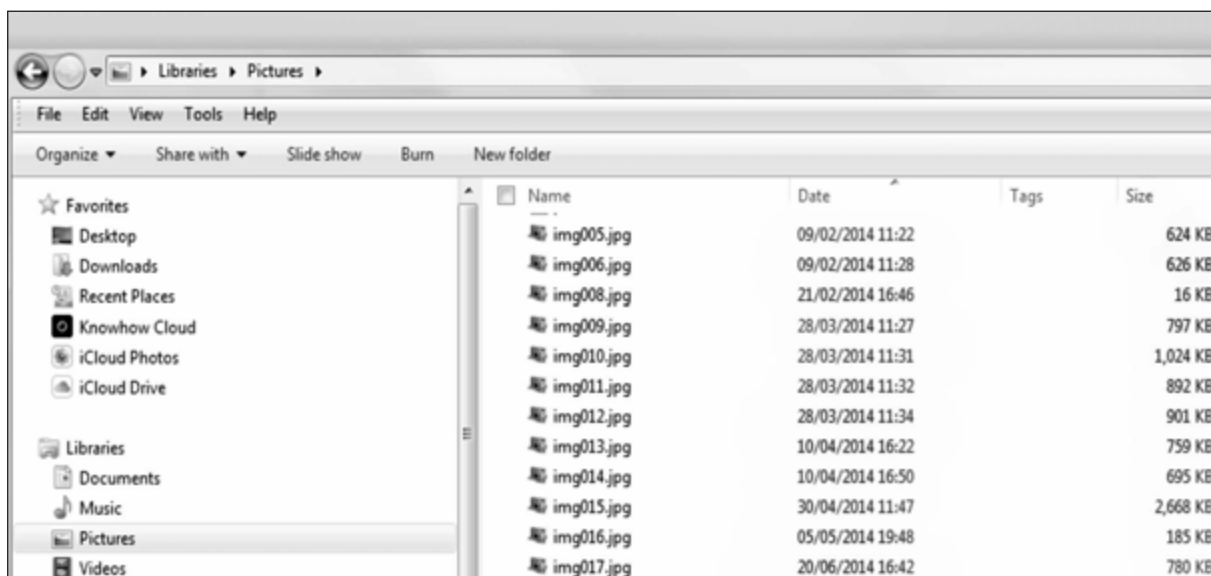
(b) Amanda stores photographs on her PC.

Figure 1 shows a screenshot of a part of her PC's directory.

Figure 1

(i) The size of img005.jpg is given as 624 KB.

State what is meant by the term KB.

(1)

....

(ii) Amanda often has difficulty finding a specific photograph.

Identify **two** methods Amanda could use to make it easier to find a file.

(2)

1 ....

....

2 ....

....

(iii) Amanda uses image editing software to edit a photograph. She then inserts the photograph into a document using word processing software.

Image editing and word processing are both examples of a type of software.

Give the name for this type of software.

(1)

....

(iv) Name **one other** type of software that must be installed on the PC to allow the image editing and word processing software to run.

(1)

....

(v) The PC has a high resolution monitor.

Identify **one other** item of hardware that must be present in the PC to display the photograph on the monitor.

(1)

....

(vi) Amanda uses a wireless printer with her PC.

Identify **two** wireless connection methods that can be used to send photographs from a PC to a wireless printer.

(2)

1 ....

....

2 ....

....

(Total for Question 17 = 14 marks)

18 Thornsville College has a cafe that provides meals for students.

The cafe struggles to serve all the students in the one-hour lunch break.

(a) Joe French manages the cafe and would like to reduce the amount of time students spend queuing at the checkouts.

(i) He has decided to produce a computer model to help him solve the problem.

Name the most appropriate type of software that would be used to produce the computer model.

(1)

....

(ii) Variables are needed as inputs to the model.

One variable could be the number of checkouts that are open.

Identify **two other** variables that could be used as inputs to the model.

(2)

Variable 1

....

....

Variable 2

....

....

(iii) Identify **two outputs** that could be produced by the model.

(2)

Output 1

....

....

Output 2

....

....

(iv) Joe uses the software to display the outputs from the model.

The software can display the outputs as a table.

Identify **one other** way the software could display the outputs.

(1)

....

....

(v) Give **two** benefits of using a computer model to solve the problem.

(2)

Benefit 1

....

....

Benefit 2

....

....

(vi) Give **two** drawbacks of using a computer model to solve the problem.

(2)

Drawback 1

....

....

Drawback 2

....

....

(vii) Describe how Joe could show that his model gives realistic outputs.

(2)

....

....

....

....

....

(b) Students pay for their meals using pre-paid cards.

Electronic data is stored on the cards using a magnetic stripe.

Thornsville College Cafe

Payment card
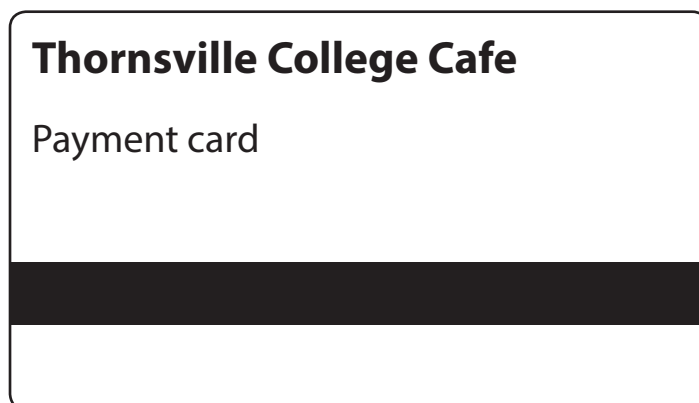
(i) Give **one other** method of storing electronic data on a card.

(1)

....

(ii) Give **two** benefits to the students of using pre-paid cards to pay for their meals.

(2)

1 ....

....

2 ....

....

(Total for Question 18 = 15 marks)

19 PT Agency provides private tutors for students.

(a) There is a network of computers within the administration office.

The network is made up of a number of workstations connected to a server.

(i) Name this type of network.

(1)

....

(ii) Give **one** way in which a workstation can be identified on the network.

(1)

....

(iii) The server manages data security on the network.

Identify **three** ways in which data security can be managed on the network.

(3)

1 ....

....

2 ....

....

3 ....

....

(iv) One benefit to staff using the network is that data security is managed for them.

Give **three other** benefits **to staff** of using the network.

(3)

1 ....

....

2 ....

....

3 ....

....

(v) PT Agency uses a broadband connection to access the internet.

Name **two other** types of connection that could be used.

(2)

1 ....

2 ....

(vi) Tutors often visit the office and access the network using mobile devices.

The mobile devices use a wireless router to connect to the network.

Describe how the wireless router connects a mobile device to the network.

(2)

....

....

....

....

(vii) A network key can be set up to prevent unauthorised access to the wireless router.

Describe how a network key prevents unauthorised access.

(2)

....

....

....

....

(b) PT Agency stores personal information about tutors and students.

(i) Name the most appropriate type of software for storing personal information.

(1)

....

(ii) Give **three** ways in which legislation impacts on the storage and use of personal data.

(3)

1 ....

....

2 ....

....

3 ....

....

(c) PT Agency encourages staff to take measures to prevent headaches when using a computer.

Identify **three** measures that **the agency** can take to help staff reduce the risk of headaches.

(3)

1 ....

....

2 ....

....

3 ....

....

(Total for Question 19 = 21 marks)

20 PRL Training provides courses for industry.

(a) Trainers deliver the content for face-to-face courses using presentation software.

Trainers and learners are given printouts to use during the courses.
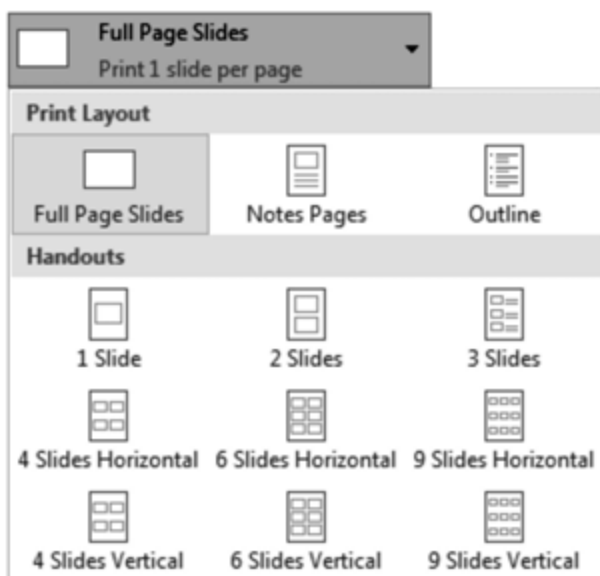
Figure 2

Figure 2 shows a screenshot of the formats that could be used for the printouts.

Identify the most appropriate formats to use for the trainers and the learners.

For each format give a reason for your choice.

(4)

Format for trainers

....

Reason

....

....

Format for learners

....

Reason

....

....

(b) PRL Training also delivers online courses.

(i) Identify **two** advantages to **learners** of courses delivered online rather than face-to-face.

(2)

1 ....

....

2 ....

....

(ii) Issues may arise for learners using technology to access online courses.

Identify **two** practical issues for **learners.**

(2)

1 ....

....

2 ....

....

(iii) Explain why the learning experience may be better on a course delivered face-to-face rather than online.

(2)

1 ....

....

2 ....

....

(c) PRL Training produces videos to support the courses.

The videos can be accessed via the internet.

Arun is a learner on one of the courses. He would like to view a training video.

He can choose to download or stream the video.

(i) Identify **three** advantages of downloading rather than streaming the video.

(3)

1 ....

....

2 ....

....

3 ....

....

(ii) Identify **three** disadvantages of downloading rather than streaming the video.

(3)

1 ....

....

2 ....

....

3 ....

....

(Total for Question 20 = 16 marks)

21 Farina spends a great deal of time travelling on trains as part of her job.

She uses a tablet computer when travelling.

(a) Farina is concerned about risks to the data on her tablet computer when it is connected to the internet.

Identify **two** risks to the data and for each give a method of reducing the risk.

(4)

Risk 1

....

Method

....

....

Risk 2

....

Method

....

....

(b) Farina keeps in touch with customers and head office by email.

She must ensure that when she sends emails the content cannot be accessed electronically by other train passengers.

Identify **two** methods that Farina can use to ensure the confidentiality of her emails during transmission.

(2)

1 ....

....

2 ....

....

(c) Farina enjoys reading science fiction books.

She downloads the books as eBooks onto her tablet computer.

(i) Identify **three** advantages to Farina of using eBooks rather than books in printed format.

(3)

1 ....

....

2 ....

....

3 ....

....

(ii) Identify **three** disadvantages to Farina of using eBooks rather than books in printed format.

(3)

1 ....

....

2 ....

....

3 ....

....

(d) Farina also uses her tablet computer to access social networking sites.

Discuss the benefits and drawbacks of using social networking sites.

(6)

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

(Total for Question 21 = 18 marks)

TOTAL FOR SECTION B = 84 MARKS
TOTAL FOR PAPER = 100 MARKS

BLANK PAGE

P48159RA02224

BLANK PAGE

P48159RA02324

BLANK PAGE