Write your name here

Surname		Other names

Edexcel International GCSE

Centre Number

Candidate Number

Information and Communication Technology
Paper 1: Written paper

Thursday 6 June 2013 – Morning	**Paper Reference**
Time: 1 hour 30 minutes	**4IT0/01**

You do not need any other materials.

Total Marks

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Answer ALL questions.

For each question, choose an answer A, B, C or D and put a cross in the box ☒.
Mark only one answer for each question. If you change your mind about an answer,
put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Which **one** of these devices can be used for both data input and output?

☒ **A** Tracker ball

☒ **B** Touch screen

☒ **C** Mouse

☒ **D** Speaker

(Total for Question 1 = 1 mark)

2 The software needed to send an email is:

☒ **A** presentation software

☒ **B** web authoring software

☒ **C** communication software

☒ **D** graphics software

(Total for Question 2 = 1 mark)

3 Which **one** of these can be used to produce a hard copy of a drawing?

☒ **A** Monitor

☒ **B** Data projector

☒ **C** Scanner

☒ **D** Plotter

(Total for Question 3 = 1 mark)

4 The type of software that controls the hardware and prepares it to run other software
is the:

☒ **A** operating system

☒ **B** applications software

☒ **C** processing software

☒ **D** control system

(Total for Question 4 = 1 mark)

5 Which **one** of these statements is accurate?

☒ **A** One kilobyte (Kb) is 1024 bytes

☒ **B** One kilobyte (Kb) is 1024 megabytes

☒ **C** One terabyte (Tb) is 1024 megabytes

☒ **D** One gigabyte (Gb) is 1024 bytes

(Total for Question 5 = 1 mark)

6 Documents can be saved on a PC's hard disk.

A hard disk is a type of:

☒ **A** secondary storage

☒ **B** primary storage

☒ **C** processor

☒ **D** output device

(Total for Question 6 = 1 mark)

7 A student plays computer games.

He has a high resolution monitor.

Which **one** of these would enhance the quality of the screen images?

☒ **A** A high quality printer

☒ **B** A high capacity hard disk

☒ **C** A high speed graphics card

☒ **D** A high quality speaker

(Total for Question 7 = 1 mark)

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

A network of computers accessible by:

☒ **A** people living in a small geographical area

☒ **B** customers of a single organisation

☒ **C** people living in a wide geographical area

☒ **D** employees of a single organisation

(Total for Question 8 = 1 mark)

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9 A supermarket uses a computer model to predict the number of checkouts to open at various times.

The software used for this is:

☒ **A** spreadsheet software

☒ **B** database software

☒ **C** CAD software

☒ **D** presentation software

(Total for Question 9 = 1 mark)

10 A network manager prevents users accessing certain websites.

She does this by setting up:

☒ **A** a firewall

☒ **B** an internet filter

☒ **C** an email filter

☒ **D** access rights

(Total for Question 10 = 1 mark)

11 A multinational bank keeps details of customer accounts on a computer.

Bank staff and customers can access the accounts.

The type of computer the bank uses is a:

☒ **A** tablet

☒ **B** standalone

☒ **C** PC

☒ **D** mainframe

(Total for Question 11 = 1 mark)

12 A PC has both ROM and RAM.

Identify the row in the table which has the correct information.

		ROM	RAM
☒	**A**	Loses stored data when the computer is turned off	Can be read from but not written to
☒	**B**	Can be written to and read from	Loses stored data when the computer is turned off
☒	**C**	Can be written to and read from	Can be written to and read from
☒	**D**	Can be read from but not written to	Loses stored data when the computer is turned off

(Total for Question 12 = 1 mark)

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

One benefit of CAM is that:

☒ **A** items produced are of a consistent standard

☒ **B** items produced are always cheaper

☒ **C** the machinery requires no monitoring

☒ **D** the machinery is inexpensive

(Total for Question 13 = 1 mark)

14 An organisation uses a Virtual Private Network (VPN) to link two offices.

The security of data sent through the VPN link is maintained by:

☒ **A** encoding

☒ **B** encryption

☒ **C** password protection

☒ **D** protocol

(Total for Question 14 = 1 mark)

15 A teacher stores test results in a database.

The teacher wants a list of boys and girls who scored at least 50 on a test.

Which **one** of these search criteria would create the list?

☒ **A** GENDER = 'boys' AND GENDER = 'girls' AND SCORE >= 50

☒ **B** GENDER = 'boys' OR GENDER = 'girls' AND SCORE > 50

☒ **C** GENDER = 'boys' OR GENDER = 'girls' AND SCORE >= 50

☒ **D** GENDER = 'boys' OR GENDER = 'girls' OR SCORE > 50

(Total for Question 15 = 1 mark)

16 Many companies provide employees with portable digital devices, such as Personal Digital Assistants (PDAs).

A PDA will help:

☒ **A** employees to keep personal data more secure

☒ **B** to reduce the need to store large amounts of data

☒ **C** employees to keep company data more secure

☒ **D** to improve communications between employees and the company

(Total for Question 16 = 1 mark)

TOTAL FOR SECTION A = 16 MARKS

P 4 1 3 8 7 A 0 7 2 4

Turn over ▶

SECTION B

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

17 Sarbir uses a PC for a range of administrative tasks.

(a) He wants to produce a letter.

(i) Identify the most appropriate **type** of software to use.

(1)

....

(ii) Identify **one** input device that Sarbir could use.

(1)

....

(iii) Identify **one** output device that Sarbir could use.

(1)

....

(b) Sarbir uses a USB pen drive to save a copy of the letter.

(i) Identify the type of memory used in the pen drive.

(1)

....

(ii) Give **two** benefits of using a USB pen drive to store data.

(2)

1 ....

....

2 ....

....

(iii) Give **one** drawback of using a USB pen drive to store data.

(1)

....

....

P 4 1 3 8 7 A 0 8 2 4

(c) Sarbir has been advised to make a backup of the documents folder that is on his PC.

(i) Give **two** reasons for this advice.

(2)

1 ....

....

2 ....

....

(ii) One decision that Sarbir should make when creating a backup is which software to use.

Identify **three** other decisions he should make.

(3)

1 ....

....

2 ....

....

3 ....

....

(Total for Question 17 = 12 marks)

18 A large supermarket has several EPOS (Electronic Point of Sale) terminals linked to a computer.

(a) Each product for sale has a bar code on it. The bar code is made up of a pattern of bars.

(i) Identify the type of device used to input data from the bar code.

(1)

....

(ii) Identify what the pattern of bars represents.

(1)

....

(iii) Give **two** benefits to the **customer** when bar codes are used at the checkout.

(2)

1 ....

....

2 ....

....

(iv) The data is input at the checkout, processed and the item is added to the sale.

Complete the table, with the numbers 2–5, to give the correct order of steps in the process.

(3)

Steps	Order
Bar code input	1
Price identified	
Item found	
Price displayed	
Information sent to database	
Item added to sale	6

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(b) Supermarket customers can pay for their goods using bank cards.

   (i) Identify the additional hardware that is needed at the checkout to process their payments.

(1)

....

   (ii) Electronic data on a bank card can be stored on a microchip or a magnetic stripe.

(Source: Visa Europe Services Inc.)

Describe **two** reasons why storing data on a microchip is preferable to storing data on a magnetic stripe.

(4)

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(Total for Question 18 = 12 marks)

19 A small company based on a single site needs to update its current ICT provision.

The company has employed a consultant to help:

- plan the project
- decide on the most appropriate system to buy
- implement the new system.

(a) The consultant uses software to plan and track the steps necessary to complete the project on time.

(i) Identify the most appropriate **type** of software to use.

(1)

....

(ii) Give **two** pieces of information that would be shown in the plan.

(2)

1 ....

2 ....

(b) The consultant recommends that the company installs a network on its site.

Name this type of network.

(1)

....

(c) Hardware costs are an important consideration when setting up a network.

Hardware costs can be reduced by using terminals, which are usually cheaper than PCs.

(i) Identify **one** other way of reducing hardware costs.

(1)

....

(ii) Additional hardware is needed for a network.

Identify **one** additional item of hardware that is required.

(1)

....

(d) The company must decide on the most appropriate type of printers to buy.

The consultant suggests that the company buys a laser printer and an inkjet printer.

For each type of printer give:

- a brief description of how it produces a printout

- **one** benefit to the company

- **one** drawback for the company.

(6)

Laser printer

How it produces a printout

....

....

Benefit

....

....

Drawback

....

....

Inkjet printer

How it produces a printout

....

....

Benefit

....

....

Drawback

....

....

P 4 1 3 8 7 A 0 1 3 2 4

(e) The network must be set up so that users can only view data and files relevant to them.

Give **two** ways in which this can be done.

(2)

1 ....

....

2 ....

....

(f) There are health risks to employees who use computers.

(i) The company has provided ergonomic keyboards to help reduce these risks.

Identify **two** other items that the company could provide.

(2)

1 ....

....

2 ....

....

(ii) Employees can also take action to reduce health risks.

The company encourages employees to take regular breaks away from their computers to reduce risks.

Identify **two** other actions that employees can take.

(2)

1 ....

....

2 ....

....

(Total for Question 19 = 18 marks)

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20 *Kroft's Kitchens* is a UK-based company selling made-to-measure kitchens.

The company employs:

- administrative staff based in its head office
- representatives who work from home.

(a) *Kroft's Kitchens* stores personal information about its employees.

The company must comply with the principles of the Data Protection Act.

(i) One principle is that companies must ensure that data is kept securely.

Give **two** other principles of the Data Protection Act.

(2)

1 ....

....

2 ....

....

(ii) Identify **two** rights that employees have under the Data Protection Act.

(2)

1 ....

....

2 ....

....

(b) Josie is a representative who works from home.

(i) Identify **two** benefits to **Josie** of being able to work from home.

(2)

1 ....

....

2 ....

....

(ii) Identify **two** benefits to the **company** of representatives working from home.

(2)

1 ....

....

2 ....

....

(c) When Josie returns home after visiting a customer she updates her PC from her laptop.

The laptop and PC can be linked using WiFi or Bluetooth.

Identify **two** advantages of using WiFi rather than Bluetooth.

(2)

1 ....

....

2 ....

....

(d) Josie connects her laptop wirelessly to her home network.

The home network has internet access.

(i) Identify the hardware device that is necessary to connect the home network to the internet.

(1)

....

(ii) Identify **two** other requirements to enable connection to the internet.

(2)

1 ....

....

2 ....

....

(iii) It is important that Josie takes steps to protect her wireless connection.

When connecting her laptop to the network for the first time Josie is prompted to enter a key.

Explain the purpose of a key.

(2)

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(iv) One type of key which may be used is WEP.

Name **one** other type of key.

(1)

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(e) Josie uses email to send the customer's order to head office.

(i) Identify the main reason for using email to send the customer's order to head office.

(1)

....

(ii) Identify **two** other methods of communicating using the internet.

For each method give an example of how Josie could use it in her work.

(4)

Method 1

....

Example

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....

Method 2

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Example

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....

(Total for Question 20 = 21 marks)

21 Widespread access to the internet has impacted on many areas of everyday life.

    (a) Many individuals now buy electrical devices such as MP3 players online. One advantage of buying goods online is that buyers do not have to leave home.

        (i) Give **three** other advantages to customers of being able to buy electrical goods online.

(3)

1 ....

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2 ....

....

3 ....

....

        (ii) Give **three** disadvantages of buying electrical goods online.

(3)

1 ....

....

2 ....

....

3 ....

....

P 4 1 3 8 7 A 0 2 0 2 4

(b) Widespread access to the internet has many benefits but it has also raised concerns about the security of personal data.

Phishing is one risk to the security of personal data.

Explain how phishing attacks are carried out.

(2)

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(c) Identify **one** other risk to the security of personal data and give a method of reducing the risk.

(2)

Risk

....

....

Method

....

....

(Total for Question 21 = 10 marks)

22 ICT has had a significant impact upon education.

(a) Students can use the internet to research a wide range of topics.

(i) Identify **three** factors that should be considered when selecting information from the internet.

(3)

1 ....

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2 ....

....

3 ....

....

(ii) Identify **two** actions that should be taken when using the selected information in a school project.

(2)

1 ....

....

2 ....

....

P 4 1 3 8 7 A 0 2 2 2 4

(b) ICT can be used in many ways to enhance students' learning.

Using the internet for research is one way in which students' learning is enhanced.

Using examples, describe other ways in which ICT can be used to enhance students' learning.

(6)

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(Total for Question 22 = 11 marks)

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