

Write your name here

Surname

Other names

Centre Number

Candidate Number

**Edexcel GCSE**

# Information and Communication Technology

## Unit 1: Living in a Digital World

Friday 13 January 2012 – Morning  
**Time: 1 hour 30 minutes**

Paper Reference

**5IT01/01**

**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 80.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (\*) are ones where the quality of your written communication will be assessed  
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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**PEARSON**

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**Answer ALL questions.**




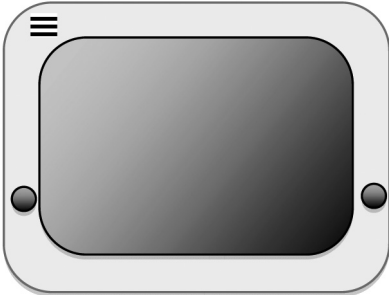
Michael and Ryan are athletes.

They use digital devices as they try to improve their performance and when they relax.

They are travelling to an overseas athletics event.



Use this information to answer Question 1(a).

Tablet Computer A		Tablet Computer B	
			
<b>Microphone</b>	None	<b>Microphone</b>	None
<b>Connectivity</b>	USB 2.0, WiFi	<b>Connectivity</b>	USB 2.0, Bluetooth
<b>Storage</b>	16 GB	<b>Storage</b>	8 GB
<b>Processor speed</b>	1.2 GHz	<b>Processor speed</b>	600 MHz
<b>Weight</b>	680 g	<b>Weight</b>	600 g
<b>Size</b>	242x190x13 mm	<b>Size</b>	230x180x16 mm
<b>SIM card slot</b>	No	<b>SIM card slot</b>	No
Tablet Computer C		Tablet Computer D	
			
<b>Microphone</b>	None	<b>Microphone</b>	Internal
<b>Connectivity</b>	Bluetooth	<b>Connectivity</b>	WiFi
<b>Storage</b>	32 GB	<b>Storage</b>	8 GB
<b>Processor speed</b>	1 GHz	<b>Processor speed</b>	800 MHz
<b>Weight</b>	220 g	<b>Weight</b>	650 g
<b>Size</b>	150x80x10 mm	<b>Size</b>	170x220x14 mm
<b>SIM card slot</b>	Yes	<b>SIM card slot</b>	No



**Some questions must be answered with a cross . If you change your mind about an answer, put a line through the box  and then mark your new answer with a cross .**

**1** Michael is travelling to an overseas athletics event. He wants to buy a new tablet computer.

(a) (i) Which **one** of these has the fastest processor?

(1)

- Tablet Computer A
- Tablet Computer B
- Tablet Computer C
- Tablet Computer D

(ii) Which **one** of these is the most portable?

(1)

- Tablet Computer A
- Tablet Computer B
- Tablet Computer C
- Tablet Computer D

(iii) Which **one** of these could be used for VoIP **without** a peripheral device?

(1)

- Tablet Computer A
- Tablet Computer B
- Tablet Computer C
- Tablet Computer D



(b) Tablet Computer B has a sensor, which detects any movement of the device.

The device uses data from the sensor to switch itself off if it is dropped.

Give **two** other ways the device could use data from the sensor.

(2)

1 .....

2 .....

(c) Michael buys a tablet computer.

He wants to transfer a fitness video from his desktop computer to his tablet computer. He has the choice of linking the devices using a wired or wireless connection.

(i) Give **one** advantage to Michael of using a **wired** connection for the transfer.

(1)

(ii) Give **one** advantage to Michael of using a **wireless** connection for the transfer.

(1)

(d) Michael's tablet computer has a SIM card slot.

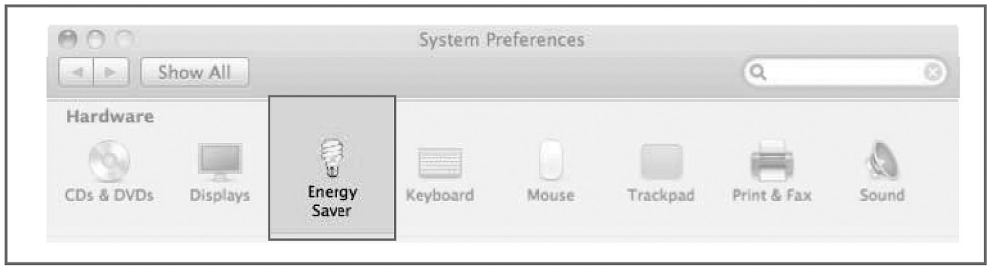
What type of connectivity could this provide?

(1)

- A** Infrared
- B** Bluetooth
- C** 3G
- D** WLAN



(e) Michael can reduce the energy use of his tablet computer.



Identify **one** feature of the tablet computer that uses energy. State what could be changed to reduce its energy use.

(2)

Feature

Change

(f) The tablet computer has a high-resolution screen.

State what is meant by 'high-resolution'.

(1)



(g) Michael's tablet computer uses a touch screen interface instead of a keyboard and mouse.

State **one** risk to Michael's health from the extended use of a touch screen interface.

(1)

(h) The tablet computer uses open source software.

Give **two** advantages to Michael of using open source software rather than proprietary software.

(2)

1 .....

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2 .....

.....

**(Total for Question 1 = 14 marks)**





2 Ryan uses the airline 'Fast Flights' to travel to overseas athletics events.

(a) Ryan enters 'fast flights' into a search engine and gets these results:

# Search

YES! 32,956 results found!

Pictures  
Maps  
Music  
Movies

**SUPER FLIGHTS – CHEAP FLIGHTS ON THE WEB – BOOK NOW!**  
Super flights, super fast, super cheap!  
www.superflights.com Last updated: 20-01-07

**FASTFLIGHTS.COM – CONTACT US**  
Contact us here  
www.fastflights.com/contact.php Last updated: 07-01-12

**VIEW VIDEO OF THE WORLD'S FASTEST PLANES!**  
Fighter jets and commercial aircraft take to the skies in this heart thumper!  
www.flightsonvideo.net Last updated: 02-01-12

(i) Why is the link to [www.superflights.com](http://www.superflights.com) at the top of the list?

(1)

- A The link had been visited before
- B The website provides the best service
- C It contains the most recent information
- D The company pays for the link to be placed there

(ii) Ryan's search has found 32,956 results, many of which are not relevant.

State **two** ways in which Ryan could refine his search.

(2)

1 .....

2 .....



(iii) Ryan clicks on this link:

<b>VIEW VIDEO OF THE WORLD'S FASTEST PLANES!</b> Fighter jets and commercial aircraft take to the skies in this heart thumper! <a href="http://www.flightsonvideo.net">www.flightsonvideo.net</a> Last updated: 02-01-12
--

It opens a viral video.

Describe why viral videos are useful to companies.

(2)

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(b) Ryan decides to buy his flight tickets online. Before he pays, he signs up for an online account.

Give **two** advantages to Ryan of using an online account to buy flight tickets.

(2)

1 .....

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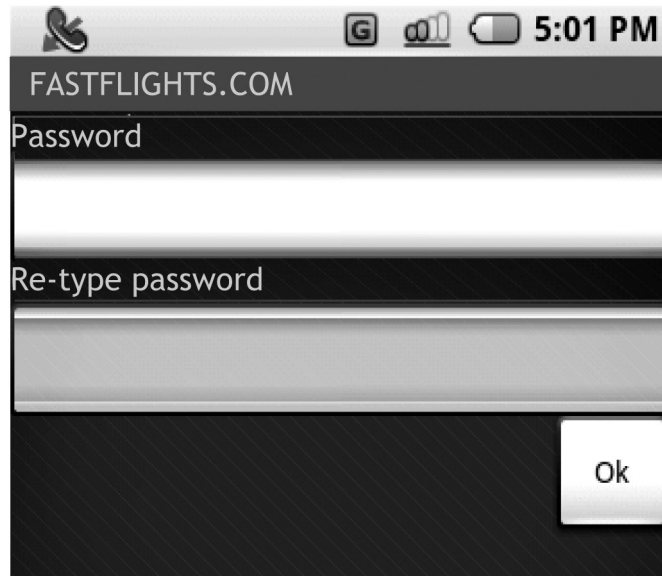
2 .....

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(c) When Ryan creates his online account, he is asked to choose a password.

He sees this:



(i) State why Ryan needs to enter his password twice.

(1)

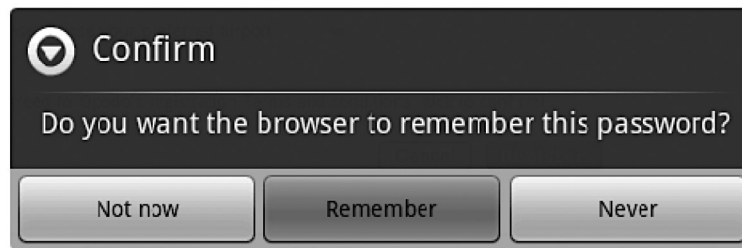
(ii) Ryan is also asked for a memorable phrase. This will be used in a challenge response test to control access to his online account.

Give **one** other example of the type of information that could be used in a challenge response test.

(1)



(d) Ryan sees this window:



(i) Which **one** of these could store Ryan's password information?

(1)

- A** Filter
- B** Certificate
- C** Bookmark
- D** Cookie

(ii) Give **one** disadvantage to Ryan of the browser remembering his password.

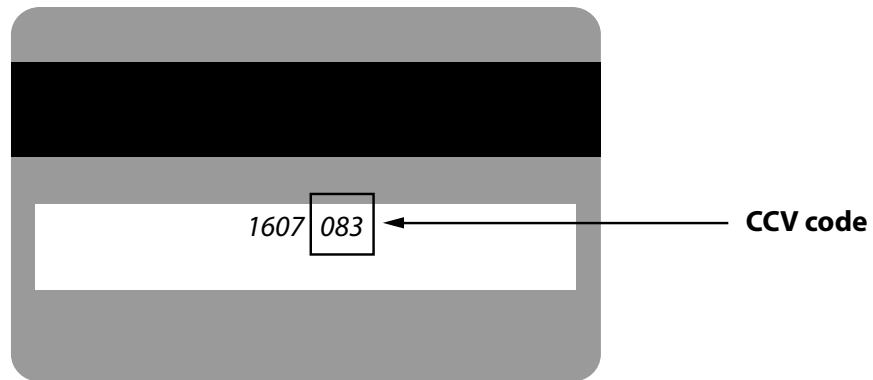
(1)

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(e) Ryan pays for the flights with his debit card. He enters his three-digit CCV code.



Why does he have to do this?

(1)

- A To validate his bank's branch number
- B To add another level of security to the transaction
- C To verify the card number
- D To include his PIN number with the transaction

(f) The website gives Ryan the option to receive offers by email.

State **one** reason why Fast Flights would ask Ryan for his permission before sending him marketing emails.

(1)

(g) The site offers RSS feeds.

State **one** reason why Ryan might subscribe to the RSS feed from this site.

(1)

**(Total for Question 2 = 14 marks)**



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3 Ryan and Michael arrive in the country where the athletics event is being held.

(a) Ryan sees that he has a mobile phone signal from a local network.

(i) Which **one** of these allows him to use the local network?

(1)

- A Dial-up
- B Freeware
- C Roaming
- D Broadband

(ii) Ryan receives a welcome message from the network on his phone.

Which **one** of these would be used to send the message?



(1)

- A SMS
- B ADSL
- C GPS
- D WPA



(b) Ryan's phone has WiFi connectivity and access to mobile broadband.

Michael's tablet computer only has WiFi connectivity.

Michael's tablet computer	Ryan's phone
 <p data-bbox="357 703 639 741">Mobile broadband ✗</p> <p data-bbox="357 766 639 804">WiFi ✓</p>	 <p data-bbox="940 703 1222 741">Mobile broadband ✓</p> <p data-bbox="940 766 1222 804">WiFi ✓</p>

(i) Describe how Ryan could share his phone's mobile broadband connection with Michael's tablet computer without using cables.

(2)

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(ii) State how Ryan could prevent other devices from sharing his connection.

(1)

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(iii) Explain why sharing the connection might affect the bandwidth available to Ryan.

(2)

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(c) Michael and Ryan are members of a team. The team uses an online workspace to work collaboratively to review a previous event.

Give **three** ways the team could use an online workspace to work collaboratively.

(3)

1 .....

2 .....

3 .....

(d) Michael uses his tablet computer to watch TV online.

(i) State **two** benefits to Michael of online TV.

(2)

1 .....

2 .....

(ii) Michael connects his tablet computer to a television.

Give **one** benefit to Michael of doing this.

(1)

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(iii) The images on this page show the connectors for the tablet computer and the television.

Draw **two** lines to show the connections needed to play audio **and** video on the **television**.

(2)

*Tablet computer connectors*

S-Video Power Line In Line Out VGA USB Firewire Media Card Security cable



*Television connectors*



Security cable SCART Line In Line Out Optical In VGA Power



(e) Michael opens a TV programme on a website hosted in his home country.

He sees this notice:



State how the website prevents viewers in other countries from watching the programme.

(1)

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**(Total for Question 3 = 16 marks)**



4 Michael is a long-distance runner. He is preparing for a marathon.

(a) He uses a Bluetooth health monitor.

What is Bluetooth?

(1)

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

(b) Michael uses Bluetooth to transfer data from the health monitor to his tablet computer.

(i) State why he might use Bluetooth rather than infrared for this transfer.

(1)

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

(2)

1 .....

2 .....

(iii) Michael encrypts the data to send it securely to the team.

Explain how encryption helps keep data secure.

(2)

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(c) On the day of the marathon, Michael checks in with the event staff and shows them this security pass:



A member of the event staff scans the barcode.

Explain why the security pass includes Michael's photograph.

(2)

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

(d) Michael wears a GPS device so his team can monitor his location during the marathon.

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

(2)

1 .....

2 .....

(e) Some social networking services also use GPS data.

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

(2)

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5 A radio reporter interviews Michael after the marathon.

The interview is recorded directly to hard disk. There is not enough recording time available.

(a) How could the recording time be increased?

(1)

- A Increase the audio resolution
- B Increase the storage space
- C Decrease the seek time
- D Increase the audio sample rate

(b) The interview is used for a podcast.

Describe what a 'podcast' is.

(2)

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(c) Michael uploads the podcast to his blog.

Which **one** of these protocols would be used to upload the podcast?

(1)

- A HTTP
- B SMS
- C POP
- D IMAP





(d) Some people cannot access the podcast.

State **two** causes of unequal access to ICT.

(2)

1 .....

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2 .....

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(e) Michael uses a search engine to choose an image to go on his blog.

Explain Michael's legal responsibilities when using images.

(2)

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(f) Michael moderates comments on his blog.

Explain why he does this.

(2)

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(g) Michael tags his blog posts.

Explain **one** benefit of this feature to blog users.

(2)

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*\* (h) "Anyone in the developed world can publish anything anytime, and the instant it is published, it is globally available and readily findable" (Shirky, 2008: 71)*

Discuss the impact of the internet on the use of news and information services.

**(6)**

Dotted lines for writing the answer.

**(Total for Question 5 = 18 marks)**

**TOTAL FOR PAPER = 80 MARKS**



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

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