

Paper Reference 4IT1/01
Pearson Edexcel
International GCSE (9-1)

Total Marks

**INFORMATION AND COMMUNICATION
TECHNOLOGY (ICT)**
PAPER 1: WRITTEN PAPER

**Time: 1 hour 30 minutes plus your additional
time allowance.**

**In the boxes below, write your name, centre number
and candidate number.**

Surname					
Other names					
Centre Number					
Candidate Number					

X66496A

YOU WILL BE GIVEN

- **A separate Data Book.**

You do not need any other materials.

INSTRUCTIONS

- **Answer ALL questions.**
- **Answer the questions in the spaces provided in this Question Paper or in the Data Book – 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.**
 - **Good luck with your examination.**
-

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 ☐.**

A family uses digital devices in their everyday lives.

Look at the photograph in the separate Data Book.

The photograph shows a family (mother, father, son and daughter) sitting on a sofa. They are using digital devices. The mother has a tablet in her right hand.

The son is holding a smartphone. The daughter is holding a laptop. They are all looking and smiling at the smartphone.

Question 1 is on the next page.

1. Howard buys a tablet computer.

(a) Give TWO types of wireless connectivity that the tablet computer could use.

(2 marks)

TYPE 1. _____

TYPE 2. _____

(b) Give TWO types of peripheral storage media that the tablet computer could use.

(2 marks)

TYPE 1. _____

TYPE 2. _____

(continued on the next page)

Turn over

1. continued

(c) Which ONE of these is required for the tablet computer to connect to the Internet?
(1 mark)

☐

A GPS

☐

B ISP

☐

C LAN

☐

D NFC

(continued on the next page)

1. continued

(d) Which ONE of these is found in all computers?
(1 mark)

☐

A Control software

☐

B Keyboard

☐

C Operating system

☐

D Processor

(continued on the next page)

1. continued

(e) Which ONE of these would be used as a desktop replacement computer?

(1 mark)

☐

A Laptop

☐

B Mainframe

☐

C Media Player

☐

D Server

(continued on the next page)

1. continued

(f) Describe how tablet computers allow people to work from home.

(2 marks)

(continued on the next page)

1. continued

(g) A CPU has 16 MiB of cache memory.

Construct an expression to show how many bits are in 16 MiB.

(3 marks)

(continued on the next page)

1. continued

(h) Howard sells his old hard disk drive to Steve.

(i) Complete the table below by ranking these storage devices in order of their read/write speed.

A) Hard disk drive

B) Optical disk drive

C) Solid state drive

(2 marks)

1 (FASTEST)	
2	
3 (SLOWEST)	

(continued on the next page)

1. continued

- (h) (ii) Describe TWO factors that affect the read/write speed of a hard disk drive.
(4 marks)**

FACTOR 1. _____

FACTOR 2. _____

(continued on the next page)

Turn over

1. continued

- (h) (iii) Explain ONE benefit to the environment of buying previously – owned devices.
(2 marks)**

(continued on the next page)

1. continued

- (h) (iv) Which ONE of these is the type of software Howard should use to make copies of his applications?
(1 mark)**

☐

A Control

☐

B Office – productivity

☐

C Project management

☐

D Utility

(Total for Question 1 = 21 marks)

2. Judy is researching online.

(a) List TWO types of user – generated reference sites Judy could use.

(2 marks)

TYPE 1. _____

TYPE 2. _____

(b) Judy uses a mobile phone to make a voice call.

On the blank space provided for Question 2 (b) in the separate Data Book, draw a diagram to show the mobile phone's input and output devices required to make the call.

Label each device you use in your diagram.

(3 marks)

(continued on the next page)

2. continued

(c) Judy sets file permissions on her online documents.

**Which ONE of these is a benefit of doing this?
(1 mark)**

☐

A Improves encryption

☐

B Increases storage

☐

C Quicker backup

☐

D Secures data

(continued on the next page)

2. continued

(d) Describe how a CAPTCHA test reduces the function of malware.

(2 marks)

(continued on the next page)

2. continued

(e) Explain ONE positive impact of cloud – based services on learning.

(2 marks)

(continued on the next page)

2. continued

- (f) Describe how mobile broadband can be used to provide access to cloud – based services.**

(2 marks)

(continued on the next page)

2. continued

(g) Give ONE reason why Judy should use mobile broadband.

(1 mark)

(h) Explain ONE benefit of using wired connectivity.

(2 marks)

(Total for Question 2 = 15 marks)

Turn over

3. Eunice installs some software on her laptop.

(a) Look at the diagram for Question 3 (a) in the separate Data Book.

Draw ONE straight line from EACH example of utility software to the correct purpose.

(3 marks)

(b) Which ONE of these types of device can have software installed to it?

(1 mark)

☐

A Memory

☐

B OMR Reader

☐

C Processor

☐

D Storage

(continued on the next page)

Turn over

3. continued

(c) Explain ONE benefit to Eunice of updating her software regularly.

(2 marks)

(continued on the next page)

3. continued

(d) Eunice is travelling by train.

**She connects to the Internet using the train's
Wi – Fi connection.**

**Explain why the Wi – Fi provider blocks
video streaming.**

(2 marks)

(continued on the next page)

3. continued

(e) The Internet has provided a wider range of entertainment and leisure opportunities.

One example is video and audio streaming.

State TWO OTHER examples.

(2 marks)

EXAMPLE 1. _____

EXAMPLE 2. _____

(continued on the next page)

3. continued

(f) Eunice changes her laptop's GPS settings.

Which ONE of these statements is true?

(1 mark)

☐

A GPS is used by all digital devices

☐

B GPS does not use an Internet connection

☐

C GPS uses cloud computing

☐

D GPS is better if open source software is used

(continued on the next page)

3. continued

(g) Eunice writes a blog.

- (i) Eunice wants visitors to her blog to see posts that are likely to be relevant to them.**

Describe how cookies can be used to achieve this.

(4 marks)

(continued on the next page)

Turn over

3. continued

-
-
-
- (g) (ii) In some countries, laws require website owners to obtain ‘informed consent’ from visitors before using cookies.**

Explain why these laws are required.

(2 marks)

(Total for Question 3 = 17 marks)

Turn over

4. Hugh sells his music online.

(a) Which ONE of these is a law that protects his work?

(1 mark)

☐

A Computer Misuse Act

☐

B Copyright, Designs and Patents Act

☐

C Human Rights Act

☐

D Data Protection Act

(continued on the next page)

4. continued

(b) List THREE benefits to Hugh of selling his music online.

(3 marks)

BENEFIT 1. _____

BENEFIT 2. _____

BENEFIT 3. _____

(continued on the next page)

Turn over

4. continued

- (c) Look at **Figure 1** for Question 4 (c) in the separate Data Book.

Figure 1 shows an image of Hugh's social media settings.

Explain **TWO** ways Hugh has protected his personal information.

(4 marks)

WAY 1. _____

(continued on the next page)

4. continued

WAY 2. _____

(continued on the next page)

4. continued

- (d) Hugh is choosing the type of computer he will use to manage the purchase and delivery of audio files to customers.**

Explain why an embedded system is a poor choice.

(2 marks)

(continued on the next page)

4. continued

(e) Hugh is working on a musical project.

- (i) List TWO key features of sound editing software that Hugh could use to create a song.**

(2 marks)

FEATURE 1. _____

FEATURE 2. _____

(continued on the next page)

4. continued

- (e) (ii) Describe TWO key features of project management software that Hugh could use to make sure the project is complete before the deadline.

(4 marks)

FEATURE 1. _____

FEATURE 2. _____

(continued on the next page)

Turn over

4. continued

- (f) Hugh uses a desktop computer to write, create and distribute his music.**

Discuss the advantages and disadvantages to Hugh of selecting a desktop computer rather than a laptop, smartphone or tablet computer.

In your answer you should consider: components, portability, connectivity, cost and maintenance.

(8 marks)

(continued on the next page)

Turn over

4. continued

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Turn over

4. continued

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Turn over

4. continued

(Total for Question 4 = 24 marks)

5. Hugh creates a website for a band.

(a) Explain ONE drawback to the website users of Hugh reducing the file size of images used on the website.

(2 marks)

(continued on the next page)

5. continued

(b) Describe the function of TWO network components that are used to transfer data on the Internet.

(4 marks)

NETWORK COMPONENT 1 _____

FUNCTION _____

NETWORK COMPONENT 2 _____

FUNCTION _____

(continued on the next page)

Turn over

5. continued

- (c) Explain why streaming allows users with limited storage on their devices to listen to the band's music.**

(2 marks)

(continued on the next page)

5. continued

- (d) Describe ONE method that should be used to secure payment data transferred between Hugh's server and other computers.
(3 marks)**

(continued on the next page)

5. continued

(e) Describe how WPA is a more secure protocol than WEP.

(2 marks)

(continued on the next page)

5. continued

- (f) Hosted applications have fewer features than local applications.**

**Explain ONE positive impact on the user experience of reducing the number of features.
(2 marks)**

(continued on the next page)

5. continued

(g) Evaluate how online communities have impacted on how we socialise.

(8 marks)

(continued on the next page)

Turn over

5. continued

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(continued on the next page)

Turn over

5. continued

[illegible]

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Turn over

5. continued

(Total for Question 5 = 23 marks)

TOTAL FOR PAPER = 100 MARKS

END OF PAPER
