



Rewarding Learning

General Certificate of Secondary Education
2014

Centre Number

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Candidate Number

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**Information and Communication
Technology (Full Course)**

Unit 3: Understanding ICT
Systems in Everyday Use and
its Implications for Individuals,
Organisations, Society and
the Wider World



[GIT31]

GIT31

WEDNESDAY 14 MAY, MORNING

TIME

2 hours.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Complete in blue or black ink only. **Do not write in pencil or with a gel pen.**

Answer **all eighteen** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is **180**.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in questions **3(b), 5(b), 7(b), 8, 12(d)** and **14(d)**.

8642.07R



40GIT3101

(c) Insurance is charged as shown below:

Number of people	Cost
Up to 20 people	£5.00
More than 20 people	£1.00 per person

In the table below, tick (✓) **two** formulae that would give the correct result in cell G2.

Formula	Tick (✓)
If(D2<=20,5,D2*1)	
If(D2>20,D2*1,5)	
If(D2<=20,D2*1,5)	
If(D2>20,5,D2*1)	

[2]

(d) How can cell C9 be used to help predict profit?

[2]

(e) Examine the Profit column. What advice would you give to Anna about each class she is running?

[2]

Examiner Only

Marks Remark

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40GIT3107

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(Questions continue overleaf)

[Turn over

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40GIT3109

3 Eleanor works for the NIGOLD Bank. The bank wishes to promote new student accounts.

(a) From the list below, tick (✓) **two** statements which are advantages of online banking.

Statement	Tick (✓)
The bank's employees can work from home	
Less staff will be needed in branches of the bank	
Overheads such as building rental will be reduced	
More branches of the bank will have to be opened	

[2]

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Marks	Remark

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40GIT3110



(b) Eleanor has been asked to explain online banking to new students entering university. You have been asked to write her speaking notes under the following headings.

- Advantages of online banking to customers
- The importance of secure websites
- Encryption

Write the speaking notes in the space provided.

Advantages of online banking to customers:

The importance of secure websites:

Encryption:

[6]

Examiner Only	
Marks	Remark
Total Question 3	

[Turn over

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40GIT3111

4 Westside College allows pupils from another school to study GCSE ICT. These pupils use the Virtual Learning Environment (VLE) and video conferencing for their studies.

(a) Apart from uploading and downloading materials, explain **two** other features of the VLE which could be used to teach GCSE ICT.

1. _____

2. _____

_____ [4]

(b) Explain **two** disadvantages to the pupils of using the VLE to teach them.

1. _____

2. _____

_____ [4]

Examiner Only	
Marks	Remark

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40GIT3112



(c) When the school is using video conferencing they must ensure they have enough bandwidth.

(i) Apart from a computer, list **three** items of equipment required for video conferencing.

1. _____

2. _____

3. _____ [3]

(ii) What is bandwidth?

_____ [2]

(iii) How can bandwidth affect video conferencing?

_____ [2]

Examiner Only

Marks Remark

Total Question 4

[Turn over

8642.07R



40GIT3113

5

John runs a successful printing business. He is concerned about the carbon footprint his company is creating and the impact of his business on the environment.

(a) State what is meant by a carbon footprint and give **two** ways in which it impacts on the environment.

[3]

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Marks	Remark

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40GIT3114





- 9 (a) Zen Video is constructing a new database. The figure below shows the table structure being set up in their database package. The table is called VIDEO.

Field Name	Data Type	Description
VideoNumber	Number	Video Number - Primary or Key field
Video Title		Title of the video
Genre		Classification of the Video, e.g Comedy, War etc
Release Date		Date video released
InStock		Is the video in stock

Examiner Only
Marks Remark

In the table below insert data types for the fields in the Video table structure. The first one is completed for you.

Field Name	Data Type
VideoNumber	Number
VideoTitle	
Genre	
Release Date	
InStock	

[4]

- (b) Some data must be entered in a certain format. Complete the sentence below by inserting the correct words from the list provided.

- Data Type
- Length Check
- Input Mask
- Error Message

The _____ defines the format of the data being entered. [1]

[Turn over



VIDEO		
Field Name	Data Type	Description
VideoNumber	Number	Video Number - Primary or Key field

In the figure above, the VideoNumber field is shown and described as a Primary or Key field.

(c) Why is a Primary or Key field necessary in the Video table?

_____ [1]

A Loan table is also created. The diagram below shows the relationship between the Loan and Video tables.



(d) From the list below, tick (✓) the relationship shown between the Video and Loan tables.

Type of Relationship	Tick (✓)
One-to-One	
One-to-Many	
Many-to-Many	

[1]

Examiner Only	
Marks	Remark



- (e) Zen Video produce the following monthly report showing which members have returned videos and the total value of each loan.

Monthly Video Returned Report

First Name	Surname	Title	Price	Returned
William	Black	Ice Age	£2.50	<input checked="" type="checkbox"/>
			£2.50	
Kalif	Omar	The Matrix	£3.00	<input checked="" type="checkbox"/>
		Perfect Storm	£3.00	<input type="checkbox"/>
		Big Daddy	£3.00	<input type="checkbox"/>
			£9.00	
Peter	Sergant	Shrek	£3.50	<input type="checkbox"/>
		Gladiator	£3.50	<input checked="" type="checkbox"/>
		Forrest Gump	£3.50	<input type="checkbox"/>
			£10.50	
Oisin	Dundas	Da Vinci Code	£4.00	<input checked="" type="checkbox"/>
			£4.00	

- (i) When producing this report Zen Video used a wizard. What is a wizard?

_____ [2]

- (ii) Circle **one** feature which has been used to organise the Monthly Video Returned Report shown.

SORT ASCENDING GROUP SUB HEADING [1]

- (iii) The owner needs a similar report but he only wants to include those videos that have been returned. Write down the criteria needed to select only those videos that have been returned.

_____ [1]

Examiner Only	
Marks	Remark
Total Question 9	

[Turn over

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40GIT3121

10 (a) In the table below, tick (✓) the **two** statements that are true about digital devices.

Statement	Tick (✓)
Using OMR reduces entry errors	
Using a touch screen will require more ICT skills than using a keyboard	
Modern digital cameras cannot record short video clips	
The quality of an image scanned by a scanner is measured in dots per inch	

[2]

(b) Complete the following sentences using the words shown below.
(Not all words will be used).

Impact printers Ink-jet printers Laser printers Plotters

The advantage of using _____ is that businesses can produce high quality detailed diagrams. _____ are more suitable for printing large volumes of data. _____ consist of a print head which contains nozzles.

[3]

Examiner Only	
Marks	Remark



(c) Kieran is learning about the memory in his computer.

(i) List **two** units used to measure memory capacity in a computer.

1. _____

2. _____ [2]

(ii) Kieran's computer contains RAM. State **one** feature of RAM.

_____ [1]

(d) Kieran has 20 films of 1 hour or more in length stored on his computer's hard drive. He needs a device that will enable him to back up these files.

Suggest a suitable backup device and state **one** advantage of using this device.

_____ [2]

(e) Kieran uses mobile communication devices.

In the table below insert the most suitable wireless technology for carrying out the following tasks. Use a different wireless technology for each answer.

Task	Technology required
Connecting a laptop to a router	
Connecting with another mobile phone to transfer data	
Using a mobile phone to access the Internet when Wi-Fi is not available	

[3]

Examiner Only

Marks Remark

Total Question 10

[Turn over

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40GIT3123

(c) Explain how a “read receipt” is different from a “delivery receipt”.

[2]

Examiner Only

Marks Remark

Total Question 11

[Turn over

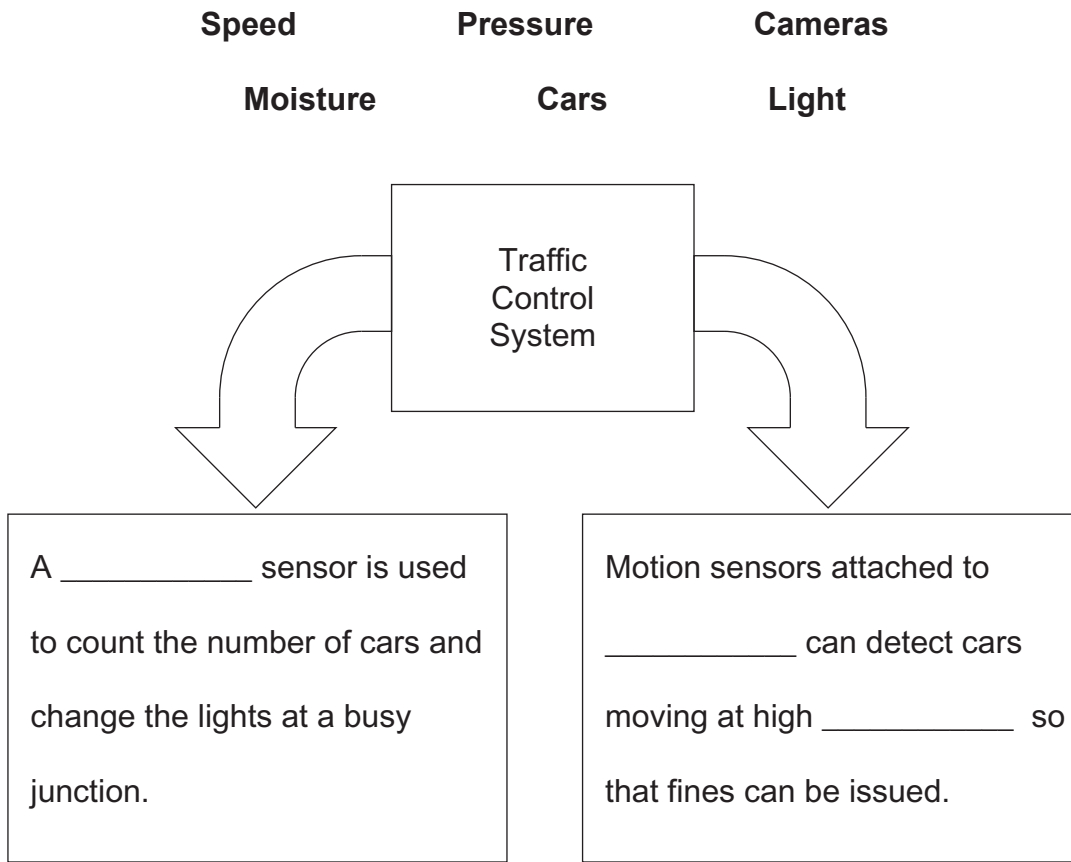
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40GIT3125

13 Most busy towns and cities use computer systems to help control traffic.

(a) Complete the following diagram using the words listed below to explain how computers can help manage traffic in a busy town. (Not all words will be used).



[3]

Examiner Only	
Marks	Remark

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40GIT3128



14 Morgan is creating a space invader computer game as part of his GCSE controlled assessment.

His game must include feedback for the user.

(a) Place a tick (✓) underneath **two** examples of feedback used when playing computer games.

A list of instructions in the help system	A display of the number of lives remaining	Selecting difficulty options at start of the game	Help and Pause buttons available on screen	Sounds play when an alien ship is destroyed
---	--	---	--	---

Tick (✓)

[2]

Morgan needs to create a Help Facility as part of his computer game but is unsure about what it should include.

(b) Identify **two** pieces of information a Help Facility should contain.

1. _____

2. _____

[2]

Examiner Only	
Marks	Remark





16 Fran's museum is completing a history project.

(a) Fran's manager gives her a printed copy of an old document. She would like to include this in the project. Identify **one** way Fran could convert the printed document into digital format.

_____ [1]

(b) Her manager reminds her of the importance of referencing her sources of information.

(i) Which law will she break if she does not reference her sources?

_____ [1]

(ii) Fran has collected data from visitors coming to the museum. She must store the data in line with the Data Protection Act. List **three** principles of this act.

1. _____

2. _____

3. _____ [3]

(iii) Fran must write to the Information Commissioner on behalf of the museum. What does the Information Commissioner do?

_____ [1]

(iv) The museum appoint Fran as the Data Controller. State what her responsibility will be.

_____ [1]

Examiner Only	
Marks	Remark



Fran's digital camera has an additional slot on the side and Fran is unsure what it is used for.



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(e) Circle the correct answer from the list below to show Fran what this slot might be used for.

USB Memory Pen SD Memory Card Battery

[1]

(f) Fran wants to use some of her photographs on the museum website. List **two** points Fran should consider when she is evaluating the suitability of each image for this purpose.

1. _____

[1]

2. _____

[1]

Examiner Only

Marks Remark

Total Question 16

[Turn over

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40GIT3135

17 United Electricity take customer meter readings from customers every three months in order to produce bills. These are stored in a transaction file.

(a) What is a transaction file?

_____ [2]

(b) Bills are produced for all customers at the same time.

(i) What type of processing is used to produce the electricity bills?

_____ [1]

(ii) Give **two** reasons why this type of processing is suitable for producing electricity bills.

1. _____

2. _____ [2]

(c) Below is a set of customer data from the transaction file.

Customer Number	Present Reading
1245	1000
1267	2000
1288	3000
1291	1500

(i) Explain how the transaction file is used to create the customers' bills.

_____ [2]

Examiner Only
Marks Remark



(ii) What is the role of the masterfile in the production of electricity bills?

_____ [2]

(d) United Electricity have a computer network. In the table below, tick (✓) **three** correct statements about networks.

Statement	Tick (✓)
Users can share files on a network and can log on at any computer to access their work	
The file server stores user data and is the least powerful computer on the network	
A router shares a network connection between devices and can be wireless	
Adding a firewall reduces network security	
Giving people different levels of access improves security on a network	
Users can share peripherals but cannot communicate with other users on the network	

[3]

(e) The IT manager is responsible for network security. Complete the table below by giving **two** more examples of threats to a network and then state how the IT manager can protect the network. A sample has been completed for you.

Threat	How can the manager protect the network?
Virus attack	Install Antivirus software and update regularly
[1]	[1]
[1]	[1]

Examiner Only
Marks Remark

Total Question 17

[Turn over

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40GIT3137

18 Using the terms in the list below choose **one** term that best matches the definition in the left-hand column (not all terms will be used).

- | | | | |
|------------------|--------------------|-------------------|-------------------|
| INTEGRITY | INFORMATION | VALIDATION | E-COMMERCE |
| MAILMERGE | CACHE | REDUNDANCY | RSI |
| RAM | BLU-RAY | PIXEL | ROM |
| CD-RW | BITMAP | ENCRYPTION | HTTP |

Definition	Term
Repeating data unnecessarily in a database	
Creating standard letters for a number of people and taking their details from a database	
The correctness, reliability and accuracy of data in a database	
An optical disk with a storage capacity large enough to hold a HD film	
The smallest area that can be edited on a graphic	
A form of internal memory that is non-volatile	
A health and safety risk arising from too much computer usage	
Shopping and conducting business transactions online	
A protocol used to send and receive web pages	
Data which has been processed and given a meaning	

[10]

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Total Question 18





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40GIT3139

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Question Number	Marks
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Examiner Number

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