Centre Number

Candidate Number

General Certificate of Secondary Education
2015

Information and Communication Technology (Short Course)

Unit 2: Understanding ICT Systems
in Everyday Use and its
Implications for Individuals,
Organisations, Society and
the Wider World

GIT41

[GIT41]
WEDNESDAY 13 MAY, MORNING

TIME

1 hour.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at
the top of this page.
You must answer the questions in the spaces provided.
Do not write outside the boxed area on each page or on blank pages.
Complete in blue or black ink only. **Do not write in pencil or with a gel pen.**
Answer **all ten** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 90.
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 **2**, **5**, **7** and **9**.

For Question 1 insert the appropriate letter in the space provided.

1 **(a)** Select the statement which is true about Random Access Memory.

    A Random Access Memory is non volatile

    B Random Access Memory is volatile

    C Random Access Memory is present on the hard disk

    D Random Access Memory is used in USB memory pens

Answer _____ [1]

(b) CSV means:

    A Common Sense Value

    B Comma Selected Value

    C Command Secure Value

    D Comma Separated Value

Answer _____ [1]

(c) Select the correct definition for data.

    A Data is facts and figures that have been given context and meaning

    B Data is something that has been output from a computer after processing

    C Data is raw facts and figures without meaning or context

    D Data is facts and figures that have been processed and presented in a meaningful form

Answer _____ [1]

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(d) An ISP is an:

   A   Internet Service Provider

   B   International Standard Provider

   C   Internet Standard Provider

   D   International Service Provider

Answer _____ [1]

(e) In a database a key field:

   A   Has the same value for each record

   B   Is always numeric

   C   Has a different value for each record

   D   Must be made up of letters and numbers

Answer _____ [1]

(f) The term WORM means:

   A   Write Once Read Many

   B   Write Only Read Media

   C   Write Once Read Media

   D   Write Only Read Many

Answer _____ [1]

[Turn over

(g) OCR stands for:

    A   Optical Computer Recognition

    B   Optical CD Recognition

    C   Optical Character Recognition

    D   Optical Control Recognition

Answer _____ [1]

(h) In the table below, tick (✓) **two** processes which are most likely to make use of OCR.

Process	Tick (✓)
Scanning a document so that the data can be edited	
Entering data directly onto a spreadsheet	
Using a GUI	
Converting handwritten postcodes on envelopes into electronic data	
Typing a document in a word processor	

[2]

2 Multimedia software is widely used when presenting information. Describe **three** features of the software which make **it** suitable for this purpose.

Feature 1 _____

_____

_____

_____

Feature 2 _____

_____

_____

_____

Feature 3 _____

_____

_____

_____ [6]

3   Forest High School allows pupils to bring their own laptops and tablets to school to access the wireless network.

Below are the details about two pupils' tablets.

	Tablet 1	Tablet 2
Screen	Size = 7.9 inches Resolution 1024x768	Size = 7 inches Resolution 1920x1200
Memory	512MB RAM	2GB RAM
Processor	1GHz Dual Core	1.5GHz Quad Core
Storage	64GB	16GB
Bluetooth	Yes	Yes
Wi-Fi	Yes	Yes
3G	No	Yes
Wireless Charging	No	Yes
Camera	8 Megapixels	5 Megapixels

(a) In the table below, tick (✓) **two** statements which are true about the tablets.

Statement	Tick (✓)
Tablet 1 will have Internet access without the need to log on to the wireless network	
Tablet 2 will have Internet access without the need to log on to the wireless network	
Tablet 1 will take better quality photographs than Tablet 2	
Tablet 2 will take better quality photographs than Tablet 1	

[2]

(b) Complete the table below, by circling the name of the tablet you would recommend for each purpose. In each case explain your choice.

Purpose	Which Tablet?	Explain your choice of tablet below
Playing online games	Tablet 1 Tablet 2 [1]	[2]
Storing HD movies	Tablet 1 Tablet 2 [1]	[2]

Each tablet has different amounts of RAM.

(c) What is the purpose of RAM?

_____

_____ [2]

(d) Describe **two** advantages to the pupils of having access to the wireless network.

1. _____

_____

2. _____

_____ [2]

(e) List **two** security measures the school could take to ensure only authorised users log on to the wireless network.

1. _____

_____

2. _____

_____ [2]

4   SamsonDigital Ltd is a software development company.

The company has developed a new application for pupils who are studying GCSE ICT. Pupils can download the application and use it on a computer or mobile device.

In order to download the application pupils must log on to a secure website which uses encryption and a firewall.

(a) What is a firewall?

_____

_____

_____ [2]

(b) Describe the process of encryption.

_____

_____

_____

_____

_____ [3]

[Turn over

Pupils are asked to set a password when they first log on to the website.

(c) List **two** pieces of advice that pupils should follow when selecting a password.

1. _____

_____

2. _____

_____ [2]

The website is stored on a file server. A back-up is taken each day.

(d) Apart from back-up, list **two** functions of a server on any network.

1. _____

_____

2. _____

_____ [2]

(e) Explain how a back-up of data can be created on a network.

_____

_____

_____ [2]

5 EFTPOS and barcodes are widely used in shops. Describe these two technologies under the following headings:

How EFTPOS and barcodes help to provide better services for customers

_____

_____

_____

_____

_____

_____

How EFTPOS and barcodes help to provide accurate information for the shop owners

_____

_____

_____

_____

_____

_____

_____ [6]

6 Below is a section of a spreadsheet for a local grocery store, showing costs and delivery charges.

	A	B	C	D	E	F	G	H	I	J
1	Delivery Charges - SM Groceries Ltd									
2	Client Code	Client Name	Address	Cost of Goods	Distance (miles)	Delivery Cost	Cost	Gold Card	Discount	Total Payable
3	DL101	Mr M Gillan	1 Papton Ave	£ 185.80	12	£ 5.00	£190.80	Y	£ 9.54	£ 181.26
4	DL102	Mrs P Mahon	23 Island Path	£ 320.67	14	£ 5.00	£325.67	Y	£ 16.28	£ 309.39
5	DL103	Miss R Rowan	19 Upper Rd	£ 150.78	18	£ 9.00	£159.78	N	FALSE	£ 159.78
6	DL104	Mr J Wilson	3 Papton Ave	£ 98.06	12	£ 5.00	£103.06	Y	£ 5.15	£ 97.91
7	DL105	Mrs L Harking	62 Oak Path	£ 204.50	22	£ 11.00	£215.50	N	FALSE	£ 215.50
8	DL106	Miss S Mullin	88 Elm Park	£ 300.90	25	£ 12.50	£313.40	N	FALSE	£ 313.40
9	DL107	Mr P Jones	11 Belmont	£ 100.67	10	£ 5.00	£105.67	N	FALSE	£ 105.67
10	DL108	Mr A Greene	14 Harrow Rd	£ 107.67	9	£ 5.00	£112.67	N	FALSE	£ 112.67
11					122		£325.67	3		£1 495.57
12										
13										
14		Cost for Delivery	0–15 miles	£ 5.00						
15			Cost per mile if more than 15 miles	£ 0.50						

(a) In the table below tick (✓) the formula which has been used in cell J11.

Formula	Tick (✓)
=SUM(J3:J10)	
=SUM(G11:H11)	
=SUM(D3:D11)	

[1]

(b) Write down the formula you would expect to find in cell G3.

_____ [1]

Delivery costs are £5 if customers live within 15 miles of the store, otherwise the cost is 50 pence per mile.

(c) (i) In the table below, tick (✓) the IF statement which will give the correct results for cell F3.

IF Statement	Tick (✓)
=IF(E3<=15,500,E3*50)	
=IF(E3<=15,5,E3*0.50)	
=IF(E3<=15,5,E3*50)	

[1]

(ii) The IF statement can make use of absolute cell references instead of values. Complete the following IF statement using absolute cell references.

=IF(E3<=15, _____, E3*_____)

[2]

(iii) State **one** advantage of using absolute cell references in this IF statement.

_____

_____

_____ [2]

A discount of 5% is given to clients who have a Gold Card.

(d) The IF statement below will show FALSE in cell I5 because the customer does not have a Gold Card. In the table below, change the IF statement so that a value of 0 will appear in cell I5 instead.

IF statement showing FALSE in cell I5	IF statement showing 0 in cell I5
=IF(H5="Y",G5*0.05)	[1]

(e) What function has been used in cell G11?

_____ [1]

A spreadsheet can be used to view the effect of changing values in cells.

(f) Describe **one** way in which this feature could be used to help the owner of SM Groceries Ltd to make decisions on pricing.

_____

_____

_____ [2]

7 The use of computer systems has provided new and changing job opportunities. Describe **two** ways in which technology has affected job opportunities in the ICT and computing sector.

1. _____

_____

_____

_____

_____

_____

2. _____

_____

_____

_____

_____

_____

_____ [6]

8 Sean is using a database to store details of second hand cars and their sales.

(a) He has created the table below for his business.

TBL_CARDETAILS						
REGISTRATION ▾	MAKE ▾	MODEL ▾	YEAR OF MANUFACTURE ▾	COLOUR ▾	PRICE ▾	MILEAGE ▾
AXZ3456	MINI	COOPER	2009	BLACK	£10,000.00	15001
DNZ7812	MAZDA	MX5	2008	GREEN	£8,500.00	46512
FGZ4976	MINI	ONE	2009	RED	£9,250.00	56489
GGZ8512	MAZDA	3	2010	BLUE	£8,250.00	48723
PRZ6589	BMW	3	2012	RED	£19,000.00	5000
TKZ1289	BMW	1	2011	SILVER	£15,000.00	8250

(i) How many fields are in the table?

_____ [1]

(ii) How many records are in the table?

_____ [1]

(iii) Suggest data types for the following fields:

Fieldname	Data Type
REGISTRATION	
PRICE	
MILEAGE	

[3]

(b) Sean has queried the database using the following criteria:

Price> 9000 AND Price<=15 000.

In the box below, list the REGISTRATION of the cars which will be returned when he runs the query.

[3]

After adding some cars to the database, Sean has produced the report shown below.

Car Details

YEAR OF MANUFACTURE	PRICE	REGISTRATION	MAKE	MODEL	COLOUR	MILEAGE
2008						
	£8,500.00	DNZ7812	MAZDA	MX5	GREEN	46512
2009						
	£9,250.00	FGZ4976	MINI	ONE	RED	56489
	£10,000.00	AXZ3456	MINI	COOPER	BLACK	15001
	£18,000.00	IUI3091	VOLVO	C70	BLACK	500
2010						
	£3,250.00	GGZ8512	MAZDA	3	BLUE	48723
2011						
	£6,000.00	RIW2345	VAUXHALL	CORSA	RED	23000
	£15,000.00	TKZ1289	BMW	1	SILVER	8250
2012						
	£6,500.00	JKZ3456	FORD	FOCUS	SILVER	2460
	£19,000.00	PRZ6589	BMW	3	RED	5000

(c) List **two** reporting features that he has used to organise the information on the report.

1. _____

2. _____ [2]

Relationships can be used to link tables in a database.

(d) List **two** different types of relationships which can be used to link tables.

1. _____

2. _____ [2]

9405

9 Ellen teaches in a coastal area in Northern Ireland. Some of her students live on islands. In the winter they can be cut off from school because of storms. Ellen has decided to use the school VLE to help teach these students.

Describe **three** advantages to the students unable to attend school of using a VLE for studying.

Advantage 1 _____

_____

_____

_____

_____

Advantage 2 _____

_____

_____

_____

_____

Advantage 3 _____

_____

_____

_____

_____

[6]

[Turn over

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

MASTER   EMBEDDING OBJECTS   WIZARD

FLASH   DATA PORTABILITY   LINKING OBJECTS

RANGE   ROM   MACRO   BANDWIDTH

BOOLEAN   PRESENCE

Definition	Term
A tool provided within a software package to help users complete a task	
A type of computer memory which cannot be written to	
A type of slide which defines the layout of all the other slides in a presentation	
A validation check used to ensure that data has been entered by the user	
A data type used when the data can have only two values	
The ability to transfer files from one system to another	
A set of program instructions executed using a single command	
Placing a chart from a spreadsheet into a word processing document so that the chart will change when the spreadsheet data changes	
A measure of rate at which data travels along a communication line	

[9]

_____

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