Centre Number

Candidate Number

General Certificate of Secondary Education
2016

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]
WEDNESDAY 18 MAY, MORNING

GIT41

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 with a gel pen.**
Answer **all eleven** 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 **6(b)**, **9** and **10(c)**.

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

1 **(a)** Select the correct statement about data.

    A   Data is information that has been processed

    B   Data is facts and figures that have been processed

    C   Data is facts and figures that have no meaning

    D   Data is information that has a meaning

Answer _____ [1]

(b) OMR stands for:

    A   Optical Magnetic Recognition

    B   Optical Magnetic Resource

    C   Optical Mark Recognition

    D   Optical Mark Resource

Answer _____ [1]

(c) Which statement about OCR is correct?

    A   OCR stands for Optical Code Recognition which is used to mark multiple choice examinations

    B   OCR stands for Optical Code Recognition which is used to scan typed or handwritten documents

    C   OCR stands for Optical Character Recognition which is used to mark multiple choice examinations

    D   OCR stands for Optical Character Recognition which is used to scan typed or handwritten documents

Answer _____ [1]

(d) Which statement correctly defines a virus?

    A   Software which is designed to damage files on the computer

    B   Software which enables the computer to access websites

    C   Hardware which is designed to damage files on the computer

    D   Hardware which enables the computer to access websites

Answer _____ [1]

(e) Which list contains only compressed file formats?

    A   txt, mpg, mp3, bmp

    B   jpg, mpg, mp3, zip

    C   jpg, mp3, zip, txt

    D   bmp, jpg, zip, txt

Answer _____ [1]

(f) Which statement is correct about flash media?

    A   Flash media makes use of a magnetic disk and is read only

    B   Flash media makes use of a magnetic disk and can be read from and written to

    C   Flash media allows for high speed data transfer and is read only

    D   Flash media allows for high speed data transfer and can be read from and written to

Answer _____ [1]

[Turn over

(g) Select the correct statement about RAM on a computer.

   A   RAM is Random Access Memory, is volatile and holds programs currently being run on the computer

   B   RAM is Read Access Memory, is volatile and permanently stores user data

   C   RAM is Random Access Memory, is non-volatile and permanently stores user data

   D   RAM is Random Access Memory, is non-volatile and holds programs currently being run on the computer

Answer _____ [1]

(h) Select the list which shows memory capacities in order from the smallest to the largest.

   A   Byte, Megabyte, Gigabyte, Kilobyte

   B   Byte, Kilobyte, Gigabyte, Megabyte

   C   Kilobyte, Byte, Megabyte, Gigabyte

   D   Byte, Kilobyte, Megabyte, Gigabyte

Answer _____ [1]

(i) A barcode contains:

   A   The price of an item, the manufacturer's code and the item code

   B   A check digit, the price of an item and the item code

   C   A check digit, the manufacturer's code and the price of an item

   D   A check digit, the manufacturer's code and the item code

Answer _____ [1]

(j) Select the correct statement about teleworking.

    A   Teleworking increases premises costs for companies

    B   Teleworking increases the area from which a company can recruit

    C   Teleworking provides opportunities for good social interaction with other workers

    D   Teleworking benefits employees because they are monitored by the company

Answer _____ [1]

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2 Below is a section from Alana's party budget spreadsheet.

	A	B	C	D	E
1	Party Date	**April 17th 2016**			
2	Funds Available	£900.00			
3		**Party Budget Summary**			
4	**Party Items**	**Estimated Cost**	**Actual Cost**	**Difference**	**Over budget?**
5	Venue	£175.00	£200.00	-£25.00	Yes
6	Disco	£125.00	£125.00	£0.00	No
7	Photographer	£75.00	£100.00	-£25.00	Yes
8	Decorations	£35.00	£32.30	£2.70	No
9	Gifts	£60.00	£60.00	£0.00	No
10	Printing	£25.00	£25.00	£0.00	No
11	Flowers	£70.00	£60.00	£10.00	No
12	Catering	£275.00	£310.50	-£35.50	Yes
13	Spot Prizes	£50.00	£70.00	-£20.00	Yes
14	Other	£100.00	£110.00	-£10.00	Yes
15	**Total Expenses**	**£990.00**	**£1,092.80**	**-£102.80**	
16					
17					
18	**Over budget**	-£192.80			

(a) How have the cells in row 3 been formatted?

_____ [1]

(b) How can the data in cells B5 to B15 be used to help Alana plan her party?

_____

_____ [1]

(c) In the table below, write down the formula used to calculate the values in the following cells.

Cell	Formula
D5	[1]
C15	[1]
B18	[1]

(d) Alana's spending does not match her available funds.

    (i) What information is available to her in column E?

    _____

    _____ [1]

    (ii) Complete the IF statement which provides the information in cell E14.

                =IF(_____ < _____, "Yes", "No")
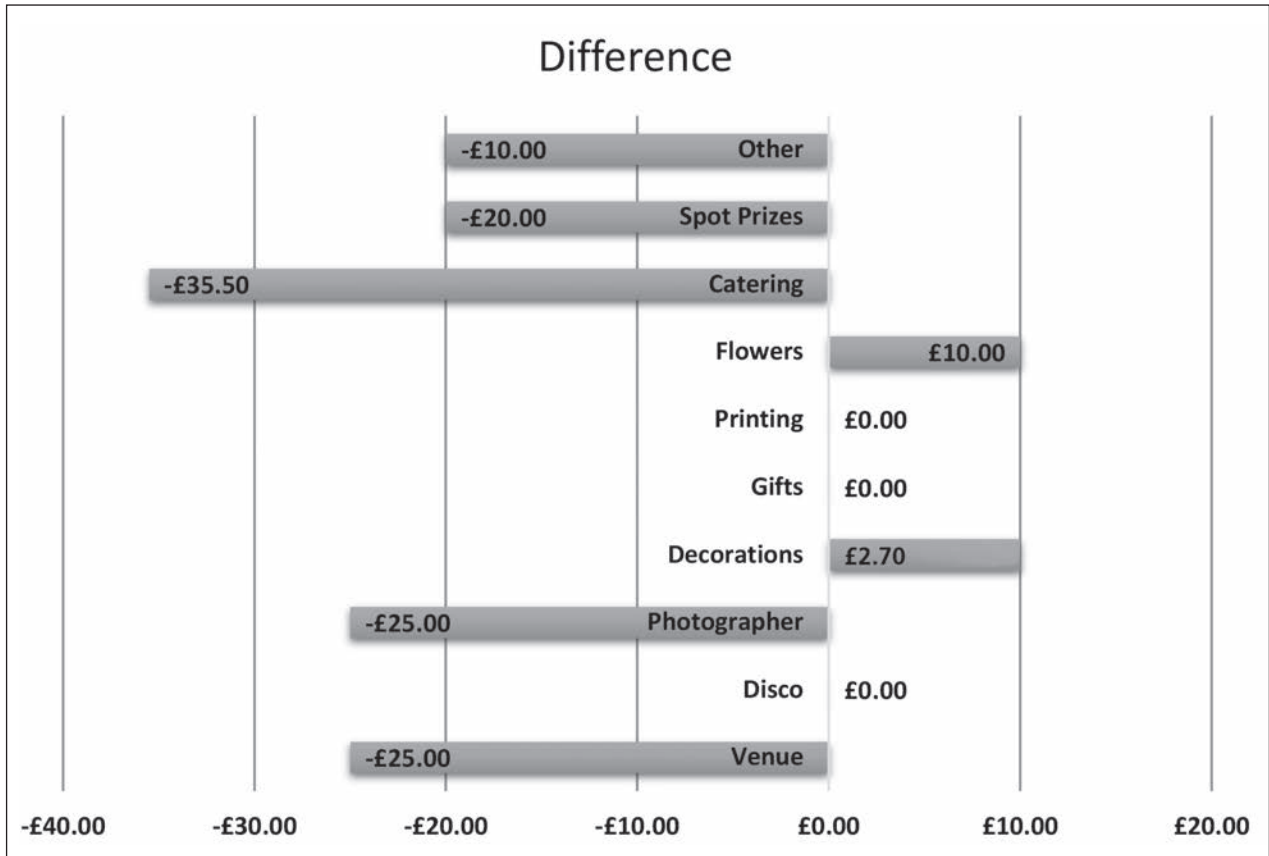
                                                                   [2]

(e) Alana must provide graphs to show information about the party costs.

(i) In the table below the graph, give **two** cell ranges that have been used to create the graph shown.

Difference

Category	Value
Other	-£10.00
Spot Prizes	-£20.00
Catering	-£35.50
Flowers	£10.00
Printing	£0.00
Gifts	£0.00
Decorations	£2.70
Photographer	-£25.00
Disco	£0.00
Venue	-£25.00

Axis: -£40.00, -£30.00, -£20.00, -£10.00, £0.00, £10.00, £20.00

Cell range 1		[1]
Cell range 2		[1]

(ii) Explain the information provided by the graph shown above.

_____

_____ [2]

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(Questions continue overleaf)

3 Dermot is an IT technician in a school.

He needs to explain to a teacher how the different ports on a computer can be used.

(a) What do the letters USB stand for?

USB: _____

_____ [1]

(b) Apart from USB, list **one** other type of port available on a computer and state how the teacher could use a device connected to this port.

Port: _____

_____

Use: _____

_____ [2]

(c) The label below appears on an external CD/DVD drive.

In the table below state whether each statement is TRUE or FALSE.

Statement	TRUE/FALSE
This device can be used to read Blu-ray discs	
This device can be used to read CD-ROM discs	
This device can be used to write information onto DVD-RW devices	
This device can be used to write information onto Blu-ray discs	

[4]

The teacher uses a scanner to make digital copies of old examination papers.

(d) Name **one** file format that could be used to store the digital copies created.

_____ [1]

One of the Technology teachers wants to buy new hardware for students working on GCSE projects.

(e) Circle the most appropriate device for the tasks listed below. Give a reason for your choice.

(i) Creating project designs using freehand drawings

      Mouse   Graphics Digitiser   Tracker Ball   [1]

Reason _____

_____ [1]

(ii) Producing hard copies of large scale designs
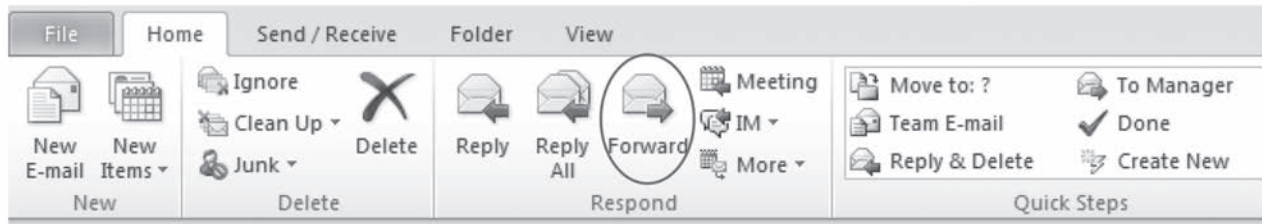
      Plotter   Monitor   Scanner   [1]

Reason _____

_____ [1]

[Turn over

4 The features available in Jim's email software are shown below.

© *Microsoft 2016. Used with permission from Microsoft*

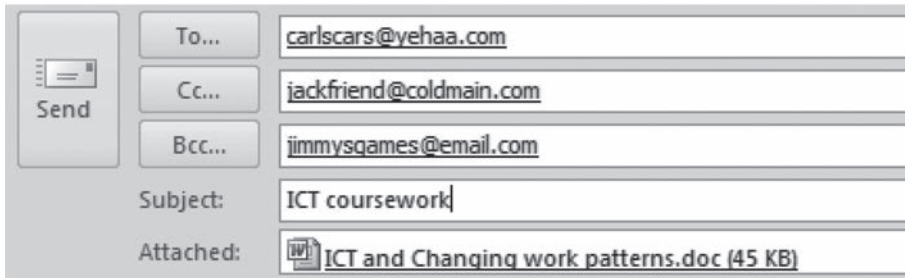**(a)** State the function of the 'Forward' feature circled above.

_____ [1]

Jim has set up groups of email addresses (distribution lists).

(b) Explain **one** advantage of using distribution lists to send emails.

_____

_____ [2]

Jim is sending an email to his friends, part of which is shown below.

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(c) Which of the email addresses shown above will not be visible to the other people receiving the email?

_____ [1]

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5 Max uses video conferencing software to speak to his family in Australia.

(a) Sometimes there is a lag between the sound and the video during a call. Explain **one** reason for the lag in signal.

_____

_____ [2]

(b) Discuss **two** of the benefits of video conferencing for Max, when speaking to his family in Australia.

1. _____

_____

_____

2. _____

_____

_____ [4]

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6 Many schools use interactive whiteboards.

(a) In the table below, tick (✓) **three** statements which are true about using an interactive whiteboard for learning.

Statement	Tick (✓)
Students can get immediate feedback from tasks completed using specially designed software	
Students need to have a high level of ICT skills if they wish to make use of an interactive whiteboard in the classroom	
Part of a lesson or instructions can be recorded, saved and played back at a later date	
An interactive whiteboard can only be activated when the student uses a finger to interact	
Handwriting can be converted into text and printed out as notes at the end of a lesson	

[3]

(b) Most schools filter Internet access in the classroom.
Discuss **two** reasons why schools might filter Internet access.

1. _____

_____

_____

2. _____

_____

_____ [4]

7 When searching online users frequently find thousands of results.

(a) State **two** ways in which a user could limit the number of results returned by a search engine.

1. _____

2. _____ [2]

(b) Why is a browser necessary when using the Internet?

_____ [1]

(c) List **two** features of a browser that will allow users to find pages previously visited.

1. _____

2. _____ [2]

8 The diagram below shows a section of a table in a database.

(a) Label the **two** shaded areas below as either field or record.

Member ID	Surname	Forename	DOB	Member Type	Paid
07135	Paine	Joe	12/10/89	Junior	Y
17171	Smith	Sandra	06/06/74	Full	Y
16104	Omar	Hawzhin	02/11/85	Full	N
17207	Chan	Christine	16/06/85	Junior	N
07078	Girvan	William	03/04/77	Full	Y
45897	eid	Sharif	03/04/98	Junior	N

[1]   [1]

(b) (i) Select a suitable Primary Key for the table above.

_____ [1]

(ii) What is the function of a Primary Key in any database?

_____ [1]

(c) Suggest a suitable data type for the following fields.

Surname _____ [1]

Paid _____ [1]

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(d) Information about members who were born after the 1/1/1986 and before the 31/12/1989 is required.

(i) What feature of the database should be used to find the members?

_____ [1]

(ii) In the table below tick (✓) the criteria that will find these members.

CRITERIA	Tick (✓)
=<01/01/1986 And >=31/12/1989	
>=01/01/1986 And <=31/12/1989	
>01/01/1986 And <31/12/1989	

[1]

9 John has been asked to develop the following applications for a local band.

- A spreadsheet to keep track of their finances
- A database to hold details of all of their bookings

Testing is an important part of developing an application. Describe how John should test each application before giving it to the band.

Spreadsheet _____

_____

_____

_____

_____

_____

Database _____

_____

_____

_____

_____

_____ [6]

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(Questions continue overleaf)

10 Northern College has a LAN with 300 computers linked in. Each computer has Internet access.

(a) (i) Expand the acronym LAN.

_____ [1]

(ii) State **two** advantages of having networked computers in the school.

1. _____

2. _____ [2]

(b) Many operating systems use a GUI.

(i) What is the function of the operating system on any computer system?

_____

_____ [2]

(ii) Describe a GUI.

_____

_____ [2]

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(c) Describe the function of the following components on a network.

- Firewall
- Router

Firewall _____

_____

_____

_____

_____

Router _____

_____

_____

_____

_____ [6]

11 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).

URL   EFTPOS   ROM   MULTIMEDIA

CACHE   VoIP   VALIDATION   COPPER

STREAMING   FIBRE-OPTIC

Definition	Term
A term which describes sound, video, animation pictures and text when used together	
The use of the Internet to make phone calls	
Equipment used to process payments at a supermarket checkout	
Cables which transfer data using pulses of light	
A form of computer memory which is located close to the processor	
A method used to ensure data entered into a computer system is within limits	
Text used by web browsers to locate a web address on the Internet	

[7]

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