

Rewarding Learning


Candidate Number


# 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 14 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.
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 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 3(b), 6(b) and 7.

For question 1 insert the appropriate letter in the space provided.
1 (a) Which statement is true about a smartcard chip?
A A smartcard chip has less storage capacity than a magnetic stripe and data on a smartcard chip cannot be updated

B A smartcard chip has less storage capacity than a magnetic stripe and data on a smartcard chip can be updated

C A smartcard chip has more storage capacity than a magnetic stripe and data on a smartcard chip can be updated
D A smartcard chip has more storage capacity than a magnetic stripe and data on a smartcard chip cannot be updated

Answer $\qquad$
(b) As well as a computer, the following are required to access the Internet:

A Webcam, Telecommunications Line, Internet Service Provider
B Internet Service Provider, Telecommunications Line, Router
C Telecommunications Line, Webcam, Router
D Telecommunications Line, Internet Service Provider, Email

Answer $\qquad$
(c) Which of the following is not a function of the operating system in a computer?

A It provides an interface for the user to interact with the hardware
B It allocates RAM to programs and data
C It controls peripheral devices
D It provides Internet access

Answer $\qquad$
(d) Select the statement which describes the function of a graphics digitiser.

A A graphics digitiser prints high quality graphics
B A graphics digitiser connects the monitor to the motherboard
C A graphics digitiser is the main electronic circuit board in a computer
D A graphics digitiser uses a stylus to input data

Answer $\qquad$
(e) Expand the acronym USB.

A A Universal Serial Byte
B A Uniform Serial Byte
C A Universal Serial Bus
D A Uniform Serial Bus

Answer $\qquad$
(f) Select the statement which is true about flash memory technology.

A It has no moving parts and consumes very little power
B It operates using read write heads and is used to store data
C It has no moving parts and requires a large power supply to operate
D It operates using read write heads and consumes very little power

Answer $\qquad$
（g）Which of the following can always be used to transfer photographs to a computer without having to pay a fee？

A Short Messaging Service and Bluetooth，Upload via cables， Multimedia Messaging Service

B Upload via cables and Multimedia Messaging Service
C Short Messaging Service and Bluetooth
D Upload via cables and Bluetooth

Answer $\qquad$
（h）Good data portability means that：
A The data stored uses very little storage space
B The data cannot be transferred from one system to another
C The data can be easily transferred from one system to another
D The data stored uses a large amount of storage space

Answer $\qquad$
（i）Select the statement which is true about fibre optic cable．
A Fibre optic cable carries data in pulses of light but is prone to interference

B Fibre optic cable carries data as electronic signals and is not prone to interference

C Fibre optic cable carries data as electronic signals and is prone to interference

D Fibre optic cable carries data in pulses of light and is not prone to interference

Answer $\qquad$
（j）Which of the following best describes an icon when using a GUI？
A A graphic which has been cropped
B A graphic representing a short cut to a program
C A graphic provided on a pull down menu
D A graphic created when a program is opened



2 Below is a simple spreadsheet created by Anna. She runs a drama school and is trying to find out how much she should charge customers in order to make a profit.

|  | A | B | C | D | E | F | G | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Lesson Name | Day of Week | Venue | Number of people | Total Income | Venue Rental | Insurance | Profit |
| 2 | Poetry | Monday | Study | 22 | £ 110.00 | £ 45.00 | £ 22.00 | £ 43.00 |
| 3 | Solo Drama | Monday | Studio | 10 | £ 50.00 | £ 45.00 | £ 5.00 | £ 0.00 |
| 4 | X-FactorFun | Tuesday | Main Hall | 20 | £ 100.00 | $£ 60.00$ | £ 5.00 | £ 35.00 |
| 5 | StrictlyDancing | Thursday | Main Hall | 20 | £ 100.00 | £ 70.00 | $£ \quad 5.00$ | $£ \quad 25.00$ |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  | Total Profit | £ 103.00 |
| 8 |  |  |  |  |  |  |  |  |
| 9 |  | How much will I charge? | $£ 5.00$ |  |  |  |  |  |

(a) Write down the formula you would expect to find in cell H 7 .
(b) In the table below, tick $(\checkmark)$ one formula that you would expect to find in cell H 4 .

| Formula | Tick $(\checkmark)$ |
| :--- | :--- |
| D4-G4-F4 |  |
| E4+F4-G4 |  |
| E4-F4-G4 |  |

$\qquad$
(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 ( $\checkmark$ ) two formulae that would give the correct result in cell G2.

| Formula | Tick $(\checkmark)$ |
| :--- | :--- |
| $\operatorname{If}\left(\mathrm{D} 2<=20,5, \mathrm{D} 2^{*} 1\right)$ |  |
| $\operatorname{If}(\mathrm{D} 2>20, \mathrm{D} 2 * 1,5)$ |  |
| If(D2<=20,D2*1,5) |  |
| If(D2>20,5,D2*1) |  |

(d) How can cell C9 be used to help predict profit?
$\qquad$
$\qquad$
(e) Examine the Profit column. What advice would you give to Anna about each class she is running?
$\qquad$
$\qquad$
(f) Which three cell ranges have been used to create the graph shown?

$\qquad$
$\qquad$
$\qquad$
(g) Anna wants to create the graph using a macro.
(i) What is a macro?
$\qquad$
$\qquad$
(ii) Describe how a macro is created in a spreadsheet.
$\qquad$
$\qquad$

| Examiner Only |  |
| :--- | :--- |
| Marks | Remark |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

3 Eleanor works for the NIGOLD Bank．The bank wishes to promote new student accounts．
（a）From the list below，tick（ $\checkmark$ ）two statements which are advantages of online banking．

| Statement | Tick $(\checkmark)$ |
| :--- | :---: |
| 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 |  |

（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
Write the speaking notes in the space provided．
Advantages of online banking to customers：
$\qquad$
$\qquad$
$\qquad$
$\qquad$
The importance of secure websites：
$\qquad$
$\qquad$
$\qquad$

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. $\qquad$
$\qquad$
2. $\qquad$
(b) Explain two disadvantages to the pupils of using the VLE to teach them.
3. $\qquad$
$\qquad$
4. $\qquad$
(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.
5. $\qquad$
6. $\qquad$
7. 

（iii）How can bandwidth affect video conferencing？
$\qquad$
$\qquad$

5 Ruth wants to edit pictures on her computer. The following software packages are available on her computer.
(a) From the list below, tick $(\checkmark)$ the most appropriate software package for editing pictures.

| Software Package | Tick $(\checkmark)$ |
| :--- | :--- |
| Presentation Software |  |
| Database Software |  |
| Graphics Software |  |
| Spreadsheet Software |  |

(b) Ruth sends the pictures to her friend Ahmed in a zipped folder. He cannot open the folder.
(i) Give one reason why Ahmed may not be able to open the zipped folder.
$\qquad$
$\qquad$
(ii) What is the benefit of sending items by email in this format?
$\qquad$
$\qquad$

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## [4]

6 Barcodes are widely used in supermarkets.
(a) Apart from the check digit state two other pieces of information stored on a barcode.

1. $\qquad$
2. 

(b) The vast majority of supermarkets have installed EFTPOS. These systems record sales transactions and allow customers to pay for their purchases.

Describe the input and output components of a typical EFTPOS system and state how they are used when a customer arrives at the checkout to make a purchase.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

7 The number of people who shop online is increasing．There are advantages for both the customer and the company．

Discuss three advantages for a company when using a website to sell products．
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

8 (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.


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 |  |

(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 $\qquad$ defines the format of the data to be entered.

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?
$\qquad$

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

（d）From the list below，tick $(\mathcal{J})$ the relationship shown between the Video and Loan tables．

| Type of Relationship | Tick $(\checkmark)$ |
| :--- | :--- |
| One－to－One |  |
| One－to－Many |  |
| Many－to－Many |  |


(e) 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.


10 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 TRANSITION | VALIDATION | E-COMMERCE |
| :---: | :---: | :---: |
| MAILMERGE CACHE | REDUNDANCY | TEMPLATE |
| ENCRYPTION BLU-RAY | PIXEL | ROM |
| CD-RW BITMAP | HYPERLINK | 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 |  |  |
| High speed memory that holds frequently used instructions |  |  |
| A ready made document layout which can be reused |  |  |
| Shopping and conducting business transactions online |  |  |
| Contains the boot up program for the computer |  |  |
| A feature which allows users to move between slides on a multimedia presentation |  |  |

[10]

## THIS IS THE END OF THE QUESTION PAPER

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