cea

Rewarding Learning

Information and Communication Technology

Assessment Unit AS 1

assessing

Module 1: Components of ICT

[AW111]

AW111

MONDAY 24 MAY, MORNING

Centre Number				
71				

Candidate Number

For Examiner's use only

Question Number	Marks
1	
2	
3	
4	
5	
6	
QWC	
Total Marks	

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.
Answer **all six** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 120 marks including a maximum of 5 for quality of written communication.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

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1 An on-line retailer asks customers to complete a questionnaire about shopping preferences.

A screen from the questionnaire is shown below.

Customer Questionnaire

First name [   ] *

Surname [   ] *

Date of birth
DD/MM/YY [ ] / [ ] / [ ]

Email address [   ] *

Confirm Email address [   ]

* Required   [**Save**]

(a) Explain what is meant by a direct data source **in this case**.

_____

_____

_____ [2]

(b) Describe one benefit and one drawback of an indirect data source.

Benefit _____

_____

_____

Drawback _____

_____

_____ [4]

(c) The data provided by customers is validated.

By referring to fields in the screen above, explain each of the following validation checks.

Presence check_____

_____

_____

Range check _____

_____

_____

Format check_____

_____

_____ [6]

(d) Data verification is used in the questionnaire.

(i) Explain the purpose of data verification.

_____

_____

_____

_____ [2]

(ii) Describe **two** examples of data verification used in the screen shown.

1. _____

_____

_____

2. _____

_____

_____ [4]

3

[Turn over

(e) A report is produced summarising the responses to the questionnaire.

The retailer uses the report to identify new product lines.

An extract from the report is shown below.

> Which of the following are you most likely to purchase?
>
> Product   Response (%)
>
> Health & Beauty   40
> Jewellery   15
> DIY   10
> Sports   5
> None   30

(i) Explain what is meant by data.

_____

_____

_____

_____ [2]

(ii) By referring to this table, explain what is meant by

Information _____

_____

_____

Knowledge _____

_____

_____

_____ [4]

(f) The retailer is a member of the International Telecommunication Union (ITU).

Explain the purpose of the ITU.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

2 An organisation's network consists of a LAN connected to the Internet.

(a) Explain how data is transferred on

A bus network

_____

_____

_____

_____

_____

A star network

_____

_____

_____

_____

_____

_____ [6]

(b) Describe how each of the following will be used in the organisation's network.

A firewall _____

_____

_____

_____

A switch _____

_____

_____

_____

A proxy server _____

_____

_____

_____ [6]

The organisation wishes to set up a video conference to inform a group of customers about a new product.

(c) Identify **four** hardware and **two** software resources which are required specifically for video conferencing.

Hardware

1. _____

2. _____

3. _____

4. _____

Software

1. _____

2. _____ [6]

(d) Describe **three** features of email which could be used instead to inform the customers of the new product.

1. _____

_____

_____

2. _____

_____

_____

3. _____

_____

_____

_____ [6]

3 Access rights and data encryption can be used to keep data secure.

(a) Explain what is meant by

Access rights

_____

_____

_____

_____

Data encryption

_____

_____

_____

_____ [6]

(b) Describe one other method of keeping data secure.

_____

_____

_____

_____ [4]

4 Manufacturers of various components make extensive use of CAD and CAM.

(a) Explain what is meant by

CAD

_____

_____

_____

_____

CAM

_____

_____

_____

_____ [4]

(b) State **two** benefits for a car manufacturer of each of the following

CAD

1. _____

_____

2. _____

_____

CAM

1. _____

_____

2. _____

_____ [4]

(c) Identify **four** different ways in which robots can be used by a car manufacturer.

1. _____

   _____

2. _____

   _____

3. _____

   _____

4. _____

   _____ [4]

5 Documentation is produced during the development of an ICT system.

(a) Name **two** different types of documentation and identify two components of each.

Name _____

Component 1 _____

Component 2 _____

Name _____

Component 1 _____

Component 2 _____ [6]

The new system undergoes testing.

(b) Explain what happens during each of the following.

Application testing

_____

_____

_____

_____

_____

_____

Acceptance testing

_____

_____

_____

_____

_____

_____ [6]

(c) A project manager is involved in the development of the system.

Identify **three** of the responsibilities of an ICT project manager.

1. _____

_____

2. _____

_____

3. _____

_____ [3]

6 The internal memory of a computer uses ROM and cache memory.

(a) Explain how a typical computer uses

ROM

_____

_____

_____

_____

Cache memory

_____

_____

_____

_____ [4]

(b) Name another type of internal memory and describe how it will be used in a typical computer.

Name _____

Use _____

_____

_____

_____ [3]

(c) The software of the computer consists of an operating system and other software.

    (i) Describe the main features of

       A multi-tasking operating system

       _____

       _____

       _____

       _____

       _____

       _____

       A multi-user operating system

       _____

       _____

       _____

       _____

       _____

       _____ **[6]**

    (ii) Describe the main features of

       Presentation software

       _____

       _____

       _____

       _____

       _____

       _____

Web authoring software

_____

_____

_____

_____

_____

Internet browser software

_____

_____

_____

_____

_____

_____ [9]

(d) The computer's user has installed some open source software.

Describe the main features of open source software.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

THIS IS THE END OF THE QUESTION PAPER

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