cea

Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
January 2011

Information and Communication Technology

Assessment Unit AS 1

assessing

Module 1: Components of ICT

[AW111]

THURSDAY 13 JANUARY, AFTERNOON

AW111

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 five** 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.

For Examiner's use only	
Question Number	**Marks**
1	
2	
3	
4	
5	
QWC	
Total Marks	

6534

1 A health centre stores each patient's medical history in a database.

(a) A report of each doctor's appointments is produced at the start of each day.

Date 12th June			Doctor Brown
Time	**Patient ID**	**Name**	**Notes**
09:30	321	Green	Cancelled
09:45	352	White	
10:00	289	Gray	

(i) By referring to the shaded cell, explain what is meant by

Data _____

_____

_____

Information _____

_____

_____ [4]

(ii) By referring to the report, explain what is meant by knowledge.

_____

_____

_____ [2]

(b) The health centre wishes to investigate eating habits among its patients.

Patients complete a questionnaire.

In this case, explain what is meant by

A direct data source _____

_____

_____

_____

An indirect data source _____

_____

_____

_____ [4]

(c) It is important that the results of the survey are accurate.

Identify **four** other factors which can affect the quality of information.

1. _____

2. _____

3. _____

4. _____
                                                              [4]

(d) Describe **three** different costs involved in the production of information.

1. _____

_____

_____

_____

2. _____

_____

_____

_____

3. _____

_____

_____

_____ [6]

2 An automated heating system has been installed in a home.

(a) The system includes a touch screen.

Describe the main features of a touch screen.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(b) The system can also use voice recognition.

(i) Describe the main features of speech input.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

5

[Turn over

(ii) Identify **two** advantages and **two** disadvantages of using speech input instead of a touch screen **in this case**.

Advantage 1 _____

_____

Advantage 2 _____

_____

Disadvantage 1 _____

_____

Disadvantage 2 _____

_____ [4]

(iii) Explain how each of the following could be used **in this case**.

Sensor _____

_____

_____

_____

Actuator _____

_____

_____

_____ [4]

(c) The system uses real time processing.

Explain what is meant by real time processing **in this case**.

_____

_____

_____

_____

_____

_____ [3]

(d) An engineer uses a laptop computer to maintain the heating system.

Identify **three** types of internal memory and state one way in which each could be used in a typical computer.

Memory _____

Use _____

_____

_____

Memory _____

Use _____

_____

_____

Memory _____

Use _____

_____

_____ [6]

3 In a school, computers are connected to the Internet using a wireless network.

(a) By referring to this network, explain what is meant by

A LAN _____

_____

_____

A WAN _____

_____

_____

_____ [4]

(b) Explain how each of the following could be used in a wireless network.

A switch _____

_____

_____

A hub _____

_____

_____ [4]

(c) One of the students wishes to obtain information about the data capacity of fibre optic cable for a coursework assignment.

(i) Describe the main features of fibre optic cable.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(ii) Explain how the student could use the Internet **in this case**.

_____

_____

_____

_____

_____

_____

_____ [4]

(iii) Explain how the student could e-mail the assignment to a group of friends.

_____

_____

_____

_____

_____

_____

_____ [4]

(iv) Describe the main impact of the Internet on

Plagiarism _____

_____

_____

_____

_____

Censorship _____

_____

_____

_____

_____ [6]

4 Application software can be custom built or purchased off-the-shelf.

(a) (i) Describe **two** advantages of custom built software compared to off-the-shelf software.

1. _____

_____

_____

2. _____

_____

_____

_____ [4]

(ii) Describe **two** advantages of off-the-shelf software compared to custom built software.

1. _____

_____

_____

2. _____

_____

_____ [4]

6534

11

[Turn over

(b) Name and describe **two** changeover methods which can be used during the installation of new software.

Name _____

Description _____

_____

_____

_____

Name _____

Description _____

_____

_____

_____ [6]

(c) Describe **three** factors which should be considered in the evaluation of new software.

1. _____

_____

_____

_____

2. _____

_____

_____

_____

3. _____

_____

_____

_____ [6]

5 The introduction of ICT has had a great impact on shopping and on entertainment.

(a) Name and describe **two** methods of security used for on-line shopping transactions.

Name _____

Description _____

_____

_____

_____

_____

_____

Name _____

Description _____

_____

_____

_____

_____

_____ [8]

(b) Describe **three** of the main benefits of digital television.

1. _____

_____

_____

_____

2. _____

_____

_____

_____

3. _____

_____

_____

_____ [6]

(c) Identify **four** main features of MP4 technology.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____ [4]

(d) One of the consequences of using ICT is the risk from viruses.

Explain what is meant by

A worm _____

_____

_____

_____

A macro virus _____

_____

_____

_____

A logic bomb _____

_____

_____

_____ [6]

THIS IS THE END OF THE QUESTION PAPER

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