



Centre Number

71	
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Candidate Number

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ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2014

Information and Communication Technology

Assessment Unit AS 1
assessing

Module 1: Components of ICT

[AP111]

MONDAY 9 JUNE, AFTERNOON

MV18

TIME

2 hours, plus your additional time allowance.

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.

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 at the end of each question indicate the marks awarded to each question or part question.

- 1 Many supermarkets use loyalty cards to reward regular customers with special offers.

Customers can apply for a loyalty card by completing an application form.

Details from these forms are keyed into a database.

- (a) By referring to the **application form** discussed above, explain what is meant by [4 marks]

A direct data source

An indirect data source

(b) Describe one benefit and one drawback of using a direct data source. [4 marks]

Benefit _____

Drawback _____

(c) Data verification is used when data is entered into the database.

Identify **two** methods of data verification. [2 marks]

1. _____

2. _____

(d) Three fields on the application form are shown below.

Customer number	12345
Town	Sometown
Post code	BB2 8ZZ

Identify and justify the most suitable field for each of the following validation checks. [6 marks]

Type check

Field _____

Justification _____

Check digit

Field _____

Justification _____

Format check

Field _____

Justification _____

2 Students have been asked to research the history of their school as part of a GCSE project.

(a) The students use the Internet to obtain information for the project.

Describe the main features of a typical Internet browser.
[4 marks]

The students obtain a hard copy of a newspaper article about the school.

(b) Explain how the text of the article could be input to the computer using OCR software. [4 marks]

(c) The newspaper contains an old photograph of the school. The photograph has been converted to a digital format.

(i) Explain how computer software could be used to enhance the photograph. [4 marks]

(ii) Describe the main features of the following file formats for storing images. [6 marks]

JPEG _____

Bitmap _____

3 The internal memory of a computer includes RAM and cache memory.

(a) Explain the purpose of each of the following. [6 marks]

RAM _____

Cache memory _____

(b) A computer contains a hard disk.

Explain how data is written to and read from a hard disk.
[5 marks]

(c) A computer requires an operating system and application software.

(i) Describe the main features of a multi-tasking operating system. [4 marks]

(ii) Explain what is meant by application software. [3 marks]

(iii) Describe **two** drawbacks of using open source software. [4 marks]

1. _____

2. _____

4 A company uses a local area network (LAN).

(a) Describe the main features of a star network. [4 marks]

(b) Describe the impact of cable failure on [4 marks]

A star network _____

A bus network _____

(c) Describe the purpose of each of the following network resources. [6 marks]

An IP address _____

A router _____

Proxy server _____

(d) The company uses an intranet.

Explain what is meant by an intranet. [3 marks]

5 An organisation requires new software.

(a) Describe **two** benefits of custom built software.

[4 marks]

1. _____

2. _____

(b) The new software is developed in stages by a number of IT professionals.

(i) Explain what happens during each of the following stages: [6 marks]

User requirements stage

Implementation stage

(ii) Describe the main responsibilities of each of the following during software development. [6 marks]

The project manager

The end user

(c) Technical documentation is produced for the new software.

(i) Identify **three** of the main components of technical documentation. [3 marks]

1. _____

2. _____

3. _____

(ii) Name and describe another type of documentation which will be produced for the new software. [5 marks]

Name

Description

6 Security is an important consideration for companies which sell their products over the Internet.

(a) Explain how each of the following can increase security over the Internet. [8 marks]

https

Paypal

(b) Explain how each of the following computer viruses can affect a computer system. [6 marks]

A logic bomb

A macro virus

(c) Describe the main features of a typical disaster recovery plan. [4 marks]

THIS IS THE END OF THE QUESTION PAPER

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
QWC	

Total Marks	
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Examiner Number

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