



Rewarding Learning

ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
2015

Centre Number

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Candidate Number

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## Information and Communication Technology

Assessment Unit AS 1  
*assessing*  
Module 1: Components of ICT

[AP111]

**TUESDAY 23 JUNE, MORNING**

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**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.

**You must answer the questions in the spaces provided.**

Complete in blue or black ink only.

Answer **all seven** questions.

### **INFORMATION FOR CANDIDATES**

The total mark for this paper is 120 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 The following diagram represents a bar code found on a book.



- (a) Explain how data is read by a barcode reader. [3 marks]

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**(b)** By referring to this diagram, explain what is meant by  
[4 marks]

Data \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Information \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**2** A laptop computer has a keyboard and a touch sensitive pad.

**(a)** Identify and justify one use for which the touch sensitive pad would be more suitable than the keyboard.

[2 marks]

Use \_\_\_\_\_

Justification \_\_\_\_\_

\_\_\_\_\_

**(b)** The computer has a touch screen.

Describe the main features of touch screen technology.

[5 marks]

\_\_\_\_\_

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(c) Identify and justify a storage device which would be suitable for backing up data on a laptop computer.  
[2 marks]

Device \_\_\_\_\_

Justification \_\_\_\_\_

\_\_\_\_\_

3 A business decides to introduce a new payroll system.

(a) (i) Describe **two** advantages of custom-built software compared to off-the-shelf software. [4 marks]

1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(ii) Describe **two** disadvantages of custom-built software over off-the-shelf software. [4 marks]

1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

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The business chooses an off-the-shelf package.

**(b)** Explain why an off-the-shelf package might be the better choice in the case of payroll software. [2 marks]

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(c) The software has been tested.

Describe each of the following types of testing.  
[6 marks]

Application testing \_\_\_\_\_

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Acceptance testing \_\_\_\_\_

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(d) User documentation is provided for the payroll package.

Describe **three** of the contents of user documentation.  
[6 marks]

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4 A computer uses a stock control system.

(a) Describe **three** ways in which this computer could use RAM. [6 marks]

1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) State and justify one way in which ROM is used.  
[2 marks]

Use \_\_\_\_\_

\_\_\_\_\_

Justification \_\_\_\_\_

\_\_\_\_\_

When keying in stock details, an employee enters a quantity as **915** instead of **195**.

(c) Name and describe the type of error which has occurred. [2 marks]

Error \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(d)** Name and describe **two** ways in which this error might be detected by data verification. [6 marks]

1. Name \_\_\_\_\_

Description \_\_\_\_\_

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2. Name \_\_\_\_\_

Description \_\_\_\_\_

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**(e)** Describe one way in which this error might be detected by data validation. [2 marks]

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**5** Computer networks are essential for modern communication.

**(a)** Explain how data travels from one computer to another on each of the following networks. [6 marks]

Bus \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Ring \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**(b)** Describe the main features of a bus/star composite network. [4 marks]

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(c) Explain how each of the following is used in network communication. [9 marks]

An IP address \_\_\_\_\_

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A gateway \_\_\_\_\_

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Proxy server \_\_\_\_\_

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6 Pupils at a school complete a multiple choice test. The completed tests are entered into a database using OMR technology.

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

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(b) Describe **two** reasons why OMR is a suitable method of data entry **in this case**. [4 marks]

1. \_\_\_\_\_

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2. \_\_\_\_\_

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(c) The database of test results must be kept secure.

Name and describe **two** methods which can be used to keep data secure. [8 marks]

Name \_\_\_\_\_

Description \_\_\_\_\_

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Name \_\_\_\_\_

Description \_\_\_\_\_

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7 A business sells its products using a website.

(a) HTML is used to create the web site.

Describe the main features of HTML. [4 marks]

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Real time processing is used for sales.

(b) Explain why real time processing is suitable **in this case**. [2 marks]

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**(c)** Describe the main features of batch processing.  
[4 marks]

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Customers make secure payments using PayPal.

**(d)** Describe the main features of PayPal. [4 marks]

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(e) Name and describe one other method of making secure on-line transactions. [4 marks]

Name \_\_\_\_\_

Description \_\_\_\_\_

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**THIS IS THE END OF THE QUESTION PAPER**

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For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
QWC	

<b>Total Marks</b>	
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Examiner Number

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