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ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
2013

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]



\*AP111\*

TUESDAY 11 JUNE, AFTERNOON

## 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.

Complete in blue or black ink only. **Do not write in pencil or with a gel pen.**

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.



- 1 The target sales and the actual sales for each department of a store are shown in the table below.

Department	Target Sales (£)	Actual Sales (£)
Men	15 000	12 341
Women	20 000	21 304
Children	10 000	10 312

Examiner Only	
Marks	Remark

- (a) (i) By referring to the table, explain what is meant by

Data \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Information \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [4]

- (ii) By referring to the figures for the Men’s Department, explain what is meant by knowledge.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [3]



A secretary enters the sales figures into the following spreadsheet.

Examiner Only	
Marks	Remark

	D	E	F	G
3	Department	Target Sales (£)	Actual Sales (£)	Target achieved?
4	Men	15 000	12 314	N
5	Women	20 000	21 304	Y
6	Children	10 000	10 312	Y
7				
8	Total	45 000	43 930	N

(b) Describe how the contents of each of the following cells could be calculated by the spreadsheet.

**E8** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**G4** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ [4]

(c) The contents of cell **F4** should be **12341**.

(i) Name and describe the type of error which has occurred.

Name \_\_\_\_\_  
 Description \_\_\_\_\_  
 \_\_\_\_\_ [2]

[Turn over



(ii) Explain how verification can be used to detect errors.

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[3]

Examiner Only	
Marks	Remark



(d) The product code for a particular item is **45667**, where **7** is the modulus 11 check digit.

Show how this check digit is calculated.

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[6]

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**Marks Remark**

Total Question 1

**[Turn over**



2 One of the main components of the CPU is internal memory.

(a) Explain how each of the following is used in a typical computer.

ROM \_\_\_\_\_

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RAM \_\_\_\_\_

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[4]

(b) Name and describe **two** of the other main components of the CPU.

Name \_\_\_\_\_

Description \_\_\_\_\_

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Name \_\_\_\_\_

Description \_\_\_\_\_

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[6]

Examiner Only	
Marks	Remark
Total Question 2	



3 A hotel has a number of interactive terminals for use by guests.

(a) Each terminal can be used to access the Internet.

(i) Describe the main features of a typical web browser.

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[4]

(ii) Describe the main features of a typical search engine.

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[4]

Examiner Only

Marks

Remark

[Turn over



Guests can access the terminals using speech input.

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Marks	Remark

**(b)** Identify **two** hardware components required specifically for speech input.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_ [2]

**(c)** Identify **two** software components required specifically for speech input.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_ [2]

**(d)** Identify **two** benefits and **two** drawbacks of using speech input.

Benefits

- 1. \_\_\_\_\_  
\_\_\_\_\_
- 2. \_\_\_\_\_  
\_\_\_\_\_

Drawbacks

- 1. \_\_\_\_\_  
\_\_\_\_\_
- 2. \_\_\_\_\_  
\_\_\_\_\_ [4]





(e) The speech input application was developed using open source software.

Explain what is meant by open source software.

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[4]

Examiner Only

Marks

Remark

Total Question 3

[Turn over





(b) Explain the purpose of each of the following network resources.

Switch \_\_\_\_\_

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

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[6]

Examiner Only	
Marks	Remark

[Turn over



(c) TCP/IP is the main communication protocol used on the Internet.

(i) Explain what is meant by a communications protocol.

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[3]

(ii) Describe the main features of the IP part of this protocol.

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[3]

Examiner Only	
Marks	Remark



(d) Describe **two** reasons why the company should consider selling its products using the Internet.

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

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [4]

Examiner Only

Marks	Remark
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Total Question 4	

[Turn over



5 An organisation introduces a new database system.

(a) During the development of the system, a feasibility study was carried out.

Explain what is meant by social feasibility.

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[3]

(b) Describe what happens during the design stage of an ICT system.

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[6]

Examiner Only	
Marks	Remark



(c) The information system was tested.

Describe the main features of

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

[6]

Examiner Only

Marks

Remark

[Turn over

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6 EFTPOS technology is used extensively in supermarkets.

(a) Describe the main features of EFTPOS technology.

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[4]

Examiner Only	
Marks	Remark

[Turn over



(b) Describe one benefit and one drawback of this use of EFTPOS for:

The supermarket

Benefit \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Drawback \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Customers

Benefit \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Drawback \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

[8]

Examiner Only	
Marks	Remark



Supermarkets use RFID technology.

(c) Describe the main features of RFID technology.

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[4]

(d) Describe one advantage of using RFID instead of barcode for stock control.

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[2]

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

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Marks Remark

Total Question 6

Quality of written communication

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Question Number	Marks
1	
2	
3	
4	
5	
6	
QWC	

<b>Total Marks</b>	
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Examiner Number

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