



Centre Number

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| 71 | |
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Candidate Number

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ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2013

**Information and
Communication
Technology**
Assessment Unit AS 1
assessing
Module 1: Components of ICT
[AW111]

MV18

TUESDAY 11 JUNE, AFTERNOON

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.

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 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 |

(a) (i) **By referring to the table**, explain what is meant by [4]

Data _____

Information _____

(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.

| | 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. [4]

E8 _____

G4 _____

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

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

Name _____

Description _____

(ii) Explain how verification can be used to detect errors. [3]

(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. [6]

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. [4]

ROM _____

RAM _____

(b) Name and describe **two** of the other main components of the CPU. [6]

Name _____

Description _____

Name _____

Description _____

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.

[4]

(ii) Describe the main features of a typical search engine. [4]

Guests can access the terminals using speech input.

(b) Identify **two** hardware components required specifically for speech input. [2]

1. _____

2. _____

(c) Identify **two** software components required specifically for speech input. [2]

1. _____

2. _____

(d) Identify **two** benefits and **two** drawbacks of using speech input. [4]

Benefits

1. _____

2. _____

Drawbacks

1. _____

2. _____

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

Explain what is meant by open source software. [4]

4 A company's LAN is connected to the Internet.

(a) Name and describe **two** different types of LAN topology.

[6]

Name _____

Description _____

Name _____

Description _____

(b) Explain the purpose of each of the following network resources. [6]

Switch _____

Proxy server _____

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

(i) Explain what is meant by a communications protocol. [3]

(ii) Describe the main features of the IP part of this protocol. [3]

(d) Describe **two** reasons why the company should consider selling its products using the Internet. [4]

1. _____

2. _____

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. [3]

(b) Describe what happens during the design stage of an ICT system. [6]

(c) The information system was tested.

Describe the main features of [6]

Application testing _____

Acceptance testing _____

(d) Describe **two** advantages of a custom-built system over an off-the-shelf system. [4]

1. _____

2. _____

(e) Explain what happens during system changeover. [4]

6 EFTPOS technology is used extensively in supermarkets.

(a) Describe the main features of EFTPOS technology. [4]

(b) Describe one benefit and one drawback of this use of EFTPOS for: [8]

The supermarket

Benefit _____

Drawback _____

Customers

Benefit _____

Drawback _____

Supermarkets use RFID technology.

(c) Describe the main features of RFID technology. [4]

(d) Describe one advantage of using RFID instead of barcode for stock control. [2]

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 | |
|--------------------|--|

Examiner Number

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