



Rewarding Learning

ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
January 2014

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\*

FRIDAY 17 JANUARY, MORNING

### 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 five** 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 down the right-hand side of pages indicate the marks awarded to each question or part question.

8452



1 Applicants for house insurance provide information about their property by completing an on-line form.

(a) Explain how this form can be used as:

A direct data source

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An indirect data source

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[4]

(b) Describe **one** benefit and **one** drawback of using an indirect data source.

Benefit \_\_\_\_\_

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Drawback \_\_\_\_\_

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[4]

| Examiner Only |        |
|---------------|--------|
| Marks         | Remark |
|               |        |



The on-line form includes both data validation and data verification.

(c) Apart from the use of a check digit, name and describe **three** different types of data validation.

Name \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_ [6]

(d) Explain the purpose of data verification.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [2]

Examiner Only

Marks

Remark

[Turn over





2 A college lecturer uses an interactive whiteboard to present a lesson to students.

(a) Describe the main features of an interactive whiteboard.

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[4]

(b) The lecturer saves a copy of the lesson on a USB memory pen.

Identify **three** features of a memory pen which make it suitable for this purpose.

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

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

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

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[3]

Examiner Only

Marks Remark

[Turn over



When the lesson is finished, students complete a multiple choice test using an OMR sheet.

(c) Describe the main features of OMR.

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[4]

(d) Describe **two** benefits of using OMR in this case.

1. 

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2. 

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[4]

| Examiner Only |        |
|---------------|--------|
| Marks         | Remark |
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The college uses a multi-user operating system.

(e) Explain the purpose of an operating system.

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[2]

(f) Describe the main features of a multi-user operating system.

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[4]

Examiner Only

| Marks | Remark |
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| Total Question 2 |  |
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[Turn over



3 Two network topologies are the bus and the star.

(a) Describe how data is transferred on each of these networks.

Bus network

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Star network

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[6]

| Examiner Only |        |
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| Marks         | Remark |
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(b) Explain why a communications protocol is necessary when data is transferred between computer networks.

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[4]

| Examiner Only |        |
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| Marks         | Remark |
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[Turn over



(c) Describe how each of the following are used on a network.

A hub

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A proxy server

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An IP address

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[9]

| Examiner Only |        |
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| Marks         | Remark |
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(d) Describe the main features of Bluetooth technology.

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[4]

(e) Explain why fibre optic cable is suitable for use in data communication.

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[3]

Examiner Only

| Marks | Remark |
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| Total Question 3 |  |
|                  |  |

[Turn over







(d) Staff at the health centre must comply with ICT legislation.

Name and describe the main features of **two** Acts specifically relating to ICT.

Name of Act \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name of Act \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [8]

| Examiner Only |        |
|---------------|--------|
| Marks         | Remark |
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(e) Patients can make appointments using the health centre's website.

Explain how a web page can be created using HTML.

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[4]

| Examiner Only    |        |
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| Marks            | Remark |
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| Total Question 4 |        |
|                  |        |

[Turn over



**5** An organisation requires new software.

**(a)** Identify **four** benefits of choosing off-the-shelf software.

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_

[4]

The organisation decides on a custom built system.

**(b)** Identify **two** factors which should be taken into account when deciding the feasibility of the proposed system.

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

[2]

| Examiner Only |        |
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| Marks         | Remark |
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(c) Describe the activities which take place during the design stage.

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[4]

| Examiner Only |        |
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| Marks         | Remark |
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[Turn over



(d) Documentation will be produced for the new system.

Describe each of the following:

Technical documentation

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User documentation

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[6]

| Examiner Only |        |
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| Marks         | Remark |
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(e) The new system will undergo testing.

Explain what is meant by each of the following:

Application testing

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Acceptance testing

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[6]

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

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| Examiner Only                    |        |
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| Marks                            | Remark |
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| Total Question 5                 |        |
|                                  |        |
| Quality of written communication |        |
|                                  |        |



**DO NOT WRITE ON THIS PAGE**

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

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| <b>Total Marks</b> |  |
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Examiner Number

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