

New
Specification



Rewarding Learning

ADVANCED
General Certificate of Education
2010

Centre Number

71	
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Candidate Number

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Information and Communication Technology

Assessment Unit A2 1

assessing

Module 3: Information Systems

[AW211]



TUESDAY 18 MAY, 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.

Answer **all six** 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.

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

Total Marks	
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6078

1 Parity checking and encryption are used when data is transmitted over a peer-to-peer network.

(a) Describe the main features of data encryption.

[4]

(b) Describe the main features of a peer-to-peer network.

[4]

(c) Explain how parity can be used to detect and correct errors in data transmission.

[6]

Examiner Only	
Marks	Remark

Communication standards have an important role to play in networked systems.

(d) Explain why communication standards are required.

[2]

(e) Describe the main features of the Open Systems Interconnection (OSI) model

[6]

Examiner Only	
Marks	Remark

2 A company has purchased a widely used ICT application. A hard copy of the user guide is available for employees.

(a) Describe **three** of the main contents of a typical user guide.

1. _____

 2. _____

 3. _____

- [6]

(b) Identify **four** advantages of using an on-line user guide rather than a hard copy.

1. _____

 2. _____

 3. _____

 4. _____

- [4]

Examiner Only	
Marks	Remark

(c) Explain how employees could get help from a user group.

[4]

(d) Explain how ICT can be used to help train a new employee to use the application.

[4]

Examiner Only	
Marks	Remark

3 In a command line interface, a word processing application is opened as shown below.

C:\>RUN WORDPRO.EXE

(a) By referring to this example, explain what is meant by

A prompt

[2]

A parameter

[2]

(b) Describe **two** ways in which an application can be opened using a typical GUI.

1. _____

2. _____

[4]

Examiner Only	
Marks	Remark

(c) ICT professionals may become members of the Association for Computing Machinery (ACM).

Describe **two** benefits of membership of the ACM.

1. _____

2. _____

_____ [4]

(d) The increasing use of ICT has resulted in changing work patterns.

Describe the impact of ICT on employees working from home.

_____ [6]

Examiner Only	
Marks	Remark

5 A supermarket uses a relational database for its stock control.

(a) In the context of a relational database, explain what is meant by

Data redundancy

[2]

Data independence

[2]

(b) Two of the entities in the database are PRODUCT and SUPPLIER.

Each product may be supplied by more than one supplier. Each supplier may supply more than one product.

Draw an entity relationship (ER) diagram for these entities that does not contain a many-to-many relationship. Indicate clearly the key fields.

[8]

Examiner Only	
Marks	Remark

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