



Rewarding Learning

ADVANCED
General Certificate of Education
2015

Centre Number

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Candidate Number

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Information and Communication Technology

Assessment Unit A2 1
assessing

Module 3:
Information Systems

MV18

[AP211]

MONDAY 1 JUNE, MORNING

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 A hospital makes extensive use of ICT.

(a) The hospital uses a centralised database.

Describe the main features of a centralised database.

[4 marks]

(b) Explain how each of the following could be used to keep data about patients secure. [8 marks]

Data encryption _____

Access rights _____

The hospital plans to use an expert system to help diagnose illnesses.

One component of the expert system will contain the knowledge and rules to be used.

(c) Explain how this component will be created. [4 marks]

(d) Name and describe **two** other components of an expert system. [6 marks]

Name _____

Description _____

Name _____

Description _____

2 A system is being developed using the waterfall life cycle model. The end user is directly involved in a number of stages.

(a) Describe the role of the end user during the Analysis stage. [3 marks]

(b) Describe one other way in which the end user is directly involved during the development of the system. [4 marks]

CASE tools may be used when an information system is developed using Rapid Application Development (RAD).

(c) Describe how an information system is developed using RAD. [5 marks]

(d) Explain how a project management CASE tool could be used. [4 marks]

(e) Name and describe **two** other CASE tools. [6 marks]

Name _____

Description _____

Name _____

Description _____

3 The user interface is an important part of a computer system.

(a) Name and describe **two** psychological factors which should be considered in the design of the user interface. [8 marks]

Factor _____

Description _____

Factor _____

Description _____

(b) One type of user interface is a command line interface.

(i) Describe the main features of a command line interface. [4 marks]

(ii) Identify **two** benefits of a command line interface. [2 marks]

1. _____

2. _____

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4 A company's employees work in teams. Data about these teams is stored in a database.

(a) Explain what is meant by each of the following.

[4 marks]

Data independence _____

Data redundancy _____

Details of two teams are shown below.

Team ID	Team Name	Employee ID	Employee Name	Dept ID	Dept Name
T001	Sales	E021	Green	D011	Marketing
		E036	Plum	D011	Marketing
		E034	Brown	D012	IT
		E045	Black	D012	IT
		E056	White	D013	Finance
T002	Research	E021	Green	D011	Marketing
		E022	Grey	D012	IT
		E045	Black	D012	IT
		E056	White	D013	Finance

(b) Produce an ER diagram, which does not contain a many-to-many relationship, for the data represented in the table. [6 marks]

(c) Normalise the data in the table to 3NF showing all your work. [6 marks]

5 Parallel running can be used during system changeover.

(a) Describe one benefit of parallel running. [2 marks]

(b) Name and describe **two** other changeover methods. [6 marks]

Name _____

Description _____

Name _____

Description _____

User support and training is provided for users of an information system.

(c) Explain how a user could get help with a specific problem from each of the following: [6 marks]

A help desk _____

A user group _____

(d) Evaluate the use of video conferencing for training users of the new system. [5 marks]

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(Questions continue overleaf)

6 Organisations using ICT must comply with relevant legislation. [8 marks]

(a) Describe the main features of

The Computer Misuse Act

The Data Protection Act

(b) A company has implemented an acceptable use policy.

Describe the main responsibilities of employees when using ICT. [4 marks]

7 As more people shop online, there is an increased risk of fraud. [10 marks]

Write a report explaining

- How ICT can be used to carry out online fraud
- Measures a retailer could take to minimise the risk of online fraud

THIS IS THE END OF THE QUESTION PAPER

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

Total Marks	
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Examiner Number

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