

**ADVANCED GCE UNIT  
APPLIED INFORMATION AND COMMUNICATION  
TECHNOLOGY**

**G054**

UNIT 15: Software Development  
**FRIDAY 15 JUNE 2007**

Afternoon

Time: 1 hour 30 minutes

Additional materials:  
Candidate Instructions G054/IC (inserted)  
Pre-release material and tasks with candidate instructions  
Candidate's pre-prepared materials



Candidate  
Name

Centre  
Number

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Candidate  
Number

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**INSTRUCTIONS TO CANDIDATES**

- Write your name, Centre number and Candidate number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **100**.
- No marks will be awarded for using brand names of software packages or hardware.
- The quality of your written communication will be assessed through Q7.

For Examiner's Use		Max
Task 2		15
Task 3		10
Task 4		5
1		4
2		3
3		5
4		4
5		6
6		6
7		10
8		12
9		4
10		4
11		12
Total		100

This document consists of **11** printed pages, **1** blank page and an insert.

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**Section A**

**This section relates to the case study on Canal Capers.**

- 1 One of the purposes of the proposed system is to standardise the software used in Canal Capers.

Describe **two** other purposes of the proposed system.

Purpose 1 .....

.....

.....

Purpose 2 .....

.....

.....[4]

- 2 One functional requirement of the proposed system is to produce reports on the status of each Narrow Boat.

State **three** other functional requirements of the proposed system.

Requirement 1 .....

.....

Requirement 2 .....

.....

Requirement 3 .....

.....[3]

3 One of the process constraints that should be considered when developing a feasibility study, is the budget given by the client.

(a) Describe the budget constraints that have been defined by Canal Capers.

.....  
.....  
.....  
.....[2]

(b) Identify **one** other process constraint that has been defined by Canal Capers.

.....[1]

(c) Describe how this has been defined by Canal Capers.

.....  
.....  
.....[2]

4 Describe **two** problems, caused by the current system at Canal Capers, that are having a direct impact on customers.

Problem 1 .....  
.....  
.....

Problem 2 .....  
.....  
.....[4]

5 One of the defined user requirements is that there should be increased security.

Describe **two** other user requirements of Canal Capers.

Requirement 1 .....

.....

.....

.....

Requirement 2 .....

.....

.....

.....[6]

6 During the feasibility stage investigations must be completed.

(a) Identify **one** method of investigation suitable for use at the **boat yard** of Canal Capers, giving **two** reasons for your choice.

Method .....

Reason 1 .....

.....

Reason 2 .....

.....[3]

(b) Identify **one** method of investigation suitable for use at the **administration offices** of Canal Capers, giving **two** reasons for your choice.

Method .....

Reason 1 .....

.....

Reason 2 .....

.....[3]



.....

.....

.....[10]

8 The data records at Canal Capers need to be stored.

(a) Identify the most suitable device for storing these records, justifying your choice.

Device .....

Justification .....

.....

.....

.....[3]

(b) Identify the most suitable device for backing up this data, justifying your choice.

Device .....

Justification .....

.....

.....

.....[3]

(c) Identify the most suitable method of data capture that would be used at the boat yard, justifying your choice.

Method .....

Justification .....

.....

.....

.....[3]

(d) The administration office produces invoices for customers.

Identify the most suitable device for this task, justifying your choice.

Device .....

Justification .....

.....

.....

.....[3]



**Section B**

**You do not need the case study or your notes to answer these questions.**

**9** Following the development and implementation of a new system, user documentation is passed to the end-user.

Explain how the following pieces of documentation may be used at a future time in the life of the system:

**(i)** security details .....  
.....  
.....[2]

**(ii)** version details .....  
.....  
.....[2]

**10** During the life of a system it may be necessary to perform maintenance.

Explain the following types of maintenance:

**(i)** adaptive .....  
.....  
.....[2]

**(ii)** corrective .....  
.....  
.....[2]

11 A removal company hires vans and removal men to assist people to move house. Decisions must be taken to choose the size of van and number of drivers required for each job. The questions that need to be asked are:

- Is the house 3 bedrooms or more?
- Will the journey take more than 3 hours?

If the house has 3 or more bedrooms then a large van will be used. If the journey time is more than 3 hours then 2 drivers are required. In all other cases a normal van will be used with 1 driver.

(i) Complete the decision table below to show which type of van will be used for each type of removal.

	Rule 1	Rule 2	Rule 3	Rule 4
<b>Conditions</b>				
No. of bedrooms => 3?				
<b>Actions</b>				
Large Van				

[6]



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