

ADVANCED GCE
APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

G054

Unit 15: Software Development

THURSDAY 5 JUNE 2008

Afternoon
 Time: 1 hour 30 minutes

Candidates answer on the question paper

Additional materials (enclosed): Instructions for Candidates G054/IC

Additional materials (required):
 Candidates pre-prepared materials



Candidate Forename

Candidate Surname

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.
- Attach your pre-prepared material for tasks 1-4.

INFORMATION FOR CANDIDATES

- The number of marks for each question 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		4
3		4
4		4
5		6
6		4
7		12
8		5
9		4
10		3
11		6
12		8
13		6
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 Island Fly.

1 One of the purposes of the proposed system is to standardise the software used.

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

Purpose 1

.....

.....

Purpose 2

.....

..... [4]

2 The owner and staff of Island Fly have defined functional and non-functional requirements.

(a) Describe **one** functional requirement that has been defined by the owner.

.....

.....

.....

..... [2]

(b) Describe the defined non-functional requirement that relates to software.

.....

.....

..... [2]

3 Island Fly has defined process constraints.

Describe the hardware constraints that have been defined by Island Fly.

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.....
.....
.....
.....
..... [4]

4 Describe **two** problems, caused by the current system at Island Fly, that are having a direct impact on the Frequent Flyer scheme.

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

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

10 Information and data about the aeroplanes needs to be stored.

Identify the most appropriate type of software for storing these records, justifying your choice.

Software

Justification

.....

..... [3]

Section B

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

11 When a system has been developed and tested it needs to be implemented.

Describe the following implementation methods:

(i) direct/big bang
.....
.....
.....
..... [3]

(ii) pilot
.....
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..... [3]

12 Diagrams and flowcharts can be used during the analysis and design stages of the systems lifecycle.

(a) Explain the function of a L0 dataflow diagram (context diagram).

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..... [4]

(b) Draw and label **two** components of a systems flowchart.

[4]

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