

OCR

Oxford Cambridge and RSA

Wednesday 22 June 2016 – Morning**A2 GCE****APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY****G054/01** Software development

Candidates answer on the Question Paper.

OCR supplied materials:

- Instructions for Candidates G054/01/IC (inserted)

Other materials required:

- Candidate's pre-prepared materials

Duration: 1 hour 30 minutes

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- The Insert will be found inside this document.
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Attach your pre-prepared materials for tasks 1–4.
- Do **not** write in the bar codes.

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 given for using brand names of software packages or hardware.
- The quality of your written communication will be assessed through Q5 and Q10.
- This document consists of **12** pages. Any blank pages are indicated.

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

2

Answer **all** questions.

SECTION A

This section relates to the case study on Ride and Sail.

- 1 The owner of Ride and Sail has defined the purposes of the proposed system. One of these relates to security.

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

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[4]

- 2 During the feasibility study, functional and non-functional requirements will be defined.

(a) Describe the **two** functional requirements that have been defined by the member of staff at Haverthwaite responsible for bookings.

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[4]

3

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

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3 Process constraints should be considered during the development of the feasibility study.

(a) Using the defined budget process constraint as an example, explain what is meant by the term process constraints.

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(b) Hardware, software and budget are three process constraints.

(i) Identify **one** other process constraint that has been defined by Ride and Sail.

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(ii) Describe how this process constraint has been defined by Ride and Sail.

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- 4 Some of the problems caused by the current system relate to the local resident loyalty scheme (LRLS).

Explain the problems relating to the LRLS at Ride and Sail.

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6 The owner of Ride and Sail has requested that the security of the data and information held at head office is increased.

(a) Explain how Ride and Sail could use usernames and passwords to achieve this requirement.

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(b) Identify and explain **one** physical security method that could be implemented at Ride and Sail.

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7 Ride and Sail needs to store and back up its data and information.

(a) Identify the most appropriate type of software for storing maintenance records about the trains and boats, and justify your choice.

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(b) Identify the most suitable **physical** device for backing up the LRLS records, and justify your choice.

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SECTION B

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

8 A level 1 Data Flow Diagram (L1 DFD) and a data dictionary could be created during the development of a new system.

(a) In a L1 DFD there are rules relating to the linking of components.

Complete the table below by inserting **Y** where components can be linked and **N** to show unacceptable links.

Data Flow Links	Data Store	External Entity	Process
Data Store			
External Entity			
Process			

[3]

(b) Define the term data dictionary.

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9 Implementation and maintenance are two stages in the systems life cycle.

(a) Describe how the pilot implementation method could be used in a system which carries out many different tasks.

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(b) (i) Describe the perfective maintenance strategy.

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(ii) Describe **one** situation where perfective maintenance could be used.

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10 Discuss, using examples, how the Copyright, Designs and Patents Act can be used to protect images used on a business website.

Marks will be awarded for the quality of written communication in your answer.

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END OF QUESTION PAPER

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