

OCR

Oxford Cambridge and RSA

Tuesday 23 June 2015 – 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 Q11.
- 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 | | 9 |
| 3 | | 7 |
| 4 | | 4 |
| 5 | | 12 |
| 6 | | 6 |
| 7 | | 4 |
| 8 | | 4 |
| 9 | | 2 |
| 10 | | 10 |
| 11 | | 8 |
| Total | | 100 |

SECTION A

This section relates to the case study on Hats and Things.

- 1 The owner of Hats and Things has defined the purposes of the proposed system. Some of these relate to software.

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

1

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2

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[4]

- 2 Functional and non-functional requirements will be defined during the feasibility study.

(a) What is meant by the term functional requirements?

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..... [1]

(b) Describe the **two** functional requirements that have been defined by the member of staff responsible for accounts.

1

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2

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[4]

3

(c) What is meant by the term non-functional requirements?

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..... [2]

(d) Describe **one** non-functional requirement which relates to the proposed stock system.

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..... [2]

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

(a) Describe the defined time process constraint.

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..... [4]

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

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

..... [1]

(ii) Describe how this process constraint has been defined by Hats and Things.

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..... [2]

4 Some of the problems caused by the current system relate to the stock records.

Explain the problems relating to the stock records used by Hats and Things.

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..... [4]

6 Shadowing could be used to gather information during the feasibility stage.

Describe **two** advantages and **one** disadvantage to Hats and Things of shadowing the Stock Manager during the investigations.

Advantage 1

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Advantage 2

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Disadvantage

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..... [6]

7 The new system will be implemented using the parallel implementation method.

(a) Describe the parallel implementation method.

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..... [2]

(b) Describe **one** advantage to Hats and Things of using the parallel implementation method.

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..... [2]

- 8 Following the implementation of the new system, the owner of Hats and Things has decided to sell knitting and craft kits.

Identify the maintenance strategy that would be used to implement this change, justifying your choice.

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..... [4]

SECTION B

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

- 9 Following the implementation of a new system, detailed program specifications and recovery procedures are passed to the client.

Identify **two** other pieces of end-user documentation which would be passed to the client.

1

2

[2]

- 10 Systems flowcharts and entity relationship diagrams (ERD) can be used during the analysis and design stage of the systems life cycle.

(a) Explain **two** advantages of using systems flowcharts.

1

2

[4]

(b) Attributes and relationships are two components of an ERD.

Identify **two** other components of an ERD.

1

2

[2]

9

(c) A M:M relationship could be used in an ERD.

Draw and label **two** other relationships which could be used in an ERD.

[4]

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