Candidate forename						Candidate surname				

Centre number						Candidate number				

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
ADVANCED GCE

G054

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

Software Development

THURSDAY 23 JUNE 2011: Morning
DURATION: 1 hour 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

Instructions for Candidates G054/IC (inserted)

OTHER MATERIALS REQUIRED:

Candidate's pre-prepared materials

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.

- Use black ink. Pencil may be used for graphs and diagrams only.

- 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).

- Answer <u>ALL</u> the questions.

- Attach your pre-prepared materials for tasks 1-4.

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 <u>100</u>.

- No marks will be awarded for using brand names of software packages or hardware.

- The quality of your written communication will be assessed through Q6 and 12.

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SECTION A

THIS SECTION RELATES TO THE CASE STUDY ON A CLEAN HOUSE.

1   One of the purposes of the proposed system is to keep records of customers who use or have recently used A Clean House.

Describe TWO other purposes of the new system.

Purpose 1 _____

_____

_____

Purpose 2 _____

_____

_____ **[4]**

2 **User requirements have been defined by the owner of A Clean House.**

Describe TWO user requirements that have been defined by the owner that relate to the suppliers.

Requirement 1 _____

_____

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_____

Requirement 2 _____

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_____ **[4]**

3   **During the development of the feasibility study, functional requirements are defined.**

Using examples from A Clean House, explain the term functional requirements.

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_____ **[6]**

4 During the development of the feasibility study process constraints should be considered.

(a) Describe ONE defined hardware constraint.

_____

_____

_____ **[2]**

(b) (i) Identify ONE other process constraint, apart from software and time, that has been defined by A Clean House.

_____ **[1]**

(ii) Describe how this has been defined by A Clean House.

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_____ **[2]**

5 Describe the problems caused by the current system at **A Clean House**, which relate to the suppliers of the cleaning materials.

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_____ **[6]**

6 **As A Clean House stores records of its customers, they will have to comply with the Data Protection Act.**

Explain, using examples, how A Clean House can comply with the Data Protection Act.

The quality of written communication will be assessed in your answer to this question.

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_____ **[12]**

7   **Following the implementation of the new system in A Clean House, users have requested changes to the system.**

Identify and describe the maintenance strategy that would be used to implement these changes.

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_____ **[3]**

8   The increased security of the data and information held on the computers at A Clean House has been defined as one of the user requirements.

Identify and describe TWO logical security measures that could be used by A Clean House.

Measure 1 _____

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Measure 2 _____

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_____ **[6]**

9 **Following the implementation of the new system, detailed program specifications will be passed to A Clean House.**

Explain how detailed program specifications could be used by A Clean House.

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_____ **[4]**

SECTION B

YOU DO NOT NEED THE CASE STUDY OR YOUR NOTES TO ANSWER THESE QUESTIONS.

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

Describe the following implementation methods:

(i) direct/big bang

_____

_____

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_____

_____ **[3]**

(ii) parallel

_____

_____

_____

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_____ **[3]**

11 **Entity Relationship Diagrams (ERD's) and Data Flow Diagrams (DFD's) can be used during the analysis and design stage of the systems lifecycle.**

(a) **Explain the function of an ERD.**

_____

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_____ **[3]**

(b) **Draw and label TWO components of a DFD.**

[4]

12 Evaluate informal methods of modelling data flows within the systems life cycle.

The quality of written communication will be assessed in your answer to this question.

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_____ **[7]**

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