



ADVANCED GCE

INFORMATION AND COMMUNICATION TECHNOLOGY G063

Systems, Applications and Implications

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:
None

Monday 14 June 2010

Afternoon

Duration: 2 hours



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use 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. Additional paper may be used if necessary but you must clearly show your Candidate Number, Centre Number and question number(s).

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 **120**, of which marks are allocated to the assessment of the quality of written communication where an answer requires a piece of extended writing.
- No marks will be awarded for using brand names of software packages or hardware.
- This document consists of **20** pages. Any blank pages are indicated.

Section A

Attempt **all** the questions in this section.

- 1 (a) Describe prototyping as a method of software development.

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..... [2]

- (b) Explain the importance of test plans in the systems cycle.

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..... [4]

2 (a) Identify **three** characteristics of a local area network (LAN).

Characteristic 1

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Characteristic 2

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Characteristic 3

..... [3]

(b) Compare an intranet to an extranet.

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..... [3]

3 (a) Define the term bandwidth.

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..... [2]

(b) Describe how different communication media affect the bandwidth available when transferring files.

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..... [4]

(c) Describe **three disadvantages** of using wireless communication in the home.

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..... [6]

4 (a) Describe what is meant by an expert system.

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..... [3]

(b) Give **two** reasons why the operator of a medical helpline would use a system which relies on rules and probabilities to give advice.

Reason 1
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Reason 2
..... [2]

5 A medical centre has a code of conduct relating to the use of the computer system by its staff.

Describe **two** advantages to the centre of having its staff abide by its code of conduct.

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6 Explain the need for adaptive, perfective and corrective maintenance of systems.

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Section B

Attempt **all** the questions in this section.

Questions 7-12 concern a hotel chain in the UK.

The directors of a hotel chain have reviewed the systems currently in place across all the hotels.

7 (a) Describe critical path analysis as a tool for project planning.

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..... [4]

(b) As guests check-in, they are currently registered on a database.

Three of the entities in the database are CUSTOMER, BOOKING and ROOM.

Draw an entity relationship diagram for this part of the database and state where a foreign key would be found.

[4]

8 (a) The user interface of the database will need to be updated.

Describe the user interface design tool known as the Model Human Processor.

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..... [2]

(b) Describe how the model can be applied to the design of the user interface.

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(c) Explain the importance of using the following in the design of tailored data entry screens.

feedback

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consistency

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colours

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..... [6]

(d) Explain how the following affect the design of an interface.

(i) Attention

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..... [2]

(ii) Memory

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(c) Describe **four** recommendations that you would make to the directors of the hotel chain to make the distributed databases more secure.

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(d) State what is meant by authentication.

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10 (a) Give **four** factors affecting decisions which must be made when upgrading software.

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..... [4]

(b) Describe parallel installation.

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(c) Give **two disadvantages** of this method of installation.

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(d) The directors wish to introduce an on-line booking system for the hotel chain.

Describe **three** characteristics of on-line booking systems used in hotels.

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PLEASE TURN OVER FOR THE LAST QUESTION

- 12 Discuss hardware and software developments that might change the way hotels function in the future.

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

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END OF QUESTION PAPER

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