CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY **9713/13**

Paper 1 **October/November 2014**

1 hour 15 minutes

Candidates answer on the Question Paper.

No additional materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
Do not use staples, paper clips, glue or correction fluid.
You may use a pencil for any diagrams, graphs or rough working.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [ ] at the end of each question or part question.

The businesses described in this paper are entirely fictitious.

This document consists of **15** printed pages and **1** blank page.

Scenario 1
Questions 1, 2, 3, 4, 5 and 6

Ali Fashions Ltd has a number of stores in Cairo. It is converting its existing computer system to make it more efficient.

A systems analyst is being employed to analyse the existing system and then design the new system.

Ali Fashions Ltd currently has two separate files, one for storing customer records and another for storing records of sales.

The customer records are processed as a single master file at the end of the day using a transaction file which is created in the course of the day. There are three types of transaction. Examples are:

- A customer cancels their account
- A new customer account is created
- A sale or payment is made.

When customers buy goods the cost of the goods is added to their account. For example, a customer buying a shirt costing $20 would need to have that sale recorded on their account. If they already owed $40, $20 would need to be added to their account to give a balance of $60.

They pay what they owe at the end of each month.

The systems analyst has decided that the sales records and the customer records should be combined into a relational database system.

1   Three methods of implementing the new system would be the use of parallel running, direct changeover and pilot running. For each statement below, tick the **most appropriate** answer.

   (a) An advantage of using parallel running would be:

	✓
It is the cheapest method of implementation	
If there is a fault with the new system the old system can still be used	
It is the fastest method of implementation	
You need two sets of workers	

[1]

   (b) An advantage of using direct changeover would be:

	✓
If there is a fault with the new system the old system can still be used	
There is no need to train the workers	
The benefits of the new system are available immediately	
The new system does not require any documentation	

[1]

   (c) An advantage of using pilot running would be:

	✓
If there is a fault with the new system not all stores in the organisation would be affected	
If there is a fault with the new system none of the stores in the organisation would be affected	
It is a quicker method of implementation than direct changeover	
It is a cheaper method than direct changeover	

[1]

2 Tick **four** reasons why technical documentation is produced.

	✓
To provide the systems analyst with a detailed overview of the whole system	
So that user documentation does not have to be produced	
So that cashiers can troubleshoot simple problems	
To make sure the developed system matches the design	
So that the system can be evaluated	
To help when the system needs amending to eliminate errors	
So that programmers can fully understand the program code that has been used	
So that users can fully understand the system	
To help cashiers operate the POS terminals	
To refer to when the system needs further development or upgrading	

[4]

3   The calculations involved in updating a customer record file following a purchase will need to be tested. A test plan consisting of a table containing columns would be created.

Name **three** of the column headings. For each one give an example or description of the possible contents of the column making reference to the data given in the scenario.

Heading 1 ....

....

Contents ....

....

Heading 2 ....

....

Contents ....

....

Heading 3 ....

....

Contents ....

....[6]

                                      [Turn over

4 (a) Name **three** types of transaction involved in the updating of the master file at the end of the day. Using the scenario, give one example of each type of transaction.

1 ....

....

....

....

2 ....

....

....

....

3 ....

....

....

....[6]

(b) Fixed magnetic hard disks are used to store the transaction and master data files. Discuss the advantages and disadvantages of using disks compared with using magnetic tape for this storage.

....

....

....

....

....

....

....

....

....

....

....

....

....[6]

5 (a) Describe the relational database that would need to be created to store the sales records and the customer records.

....**[Turn.....**

....

....

....

....

....

....

....

....

....[5]

(b) Give **three** reasons why the systems analyst would recommend a relational database.

1 ....

....

2 ....

....

3 ....

....[3]

6 (a) When data is entered into the new database it will need to be verified. Describe **two** ways in which this can be done.

1 ....

....

....

....

2 ....

....

....

....[4]

(b) Describe the differences between validation and verification.

....

....

....

....

....

....[3]

Scenario 2
Questions 7, 8, 9 and 10

The WIMBA car company has automated production lines. Computer controlled robot arms are used to produce its new model.

The company wishes to advertise all aspects of its business, including car insurance, as well as this new model. It is planning to advertise using multimedia presentations in shopping malls.

Maria is the manager of the advertising department. She uses time management software in her job. Many workers in her department work compressed hours.

7 (a) For each of the following **four** end effectors, describe the task each would perform in car production.

Camera ....

....

Welding gun ....

....

Vacuum cup ....

....

Spray gun ....

....[4]

(b) Give **four** reasons why companies use robots when assembling car bodies.

1 ....

....

2 ....

....

3 ....

....

4 ....

....[4]

8 (a) Describe the **three** types of advertising shown below. Give an example of each type, referring **only** to aspects of the car company used in this scenario.

Business ....

....

Example ....

....

Product ....

....

Example ....

....

Service ....

....

Example ....

....[6]

(b) Describe, with reference to the scenario, **four** features which are found in a multimedia presentation which would not be found in a flyer.

1 ....

....

2 ....

....

3 ....

....

4 ....

....[4]

9 Maria uses software to help her carry out a number of time management tasks.

Describe **three** of these tasks that she might wish to carry out.

1 ....

....

2 ....

....

3 ....

....[3]

10 (a) Describe what is meant by working compressed hours.

....

....

....

....[2]

(b) Describe **two** drawbacks to the worker of working compressed hours.

1 ....

....

2 ....

....[2]

(c) Describe **two** drawbacks to the company of workers working compressed hours.

1 ....

....

2 ....

....[2]

Scenario 3
Question 11

ICE refrigerators Ltd is an English company which manufactures refrigerators. It provides a help line service to its customers.

When customers phone the help line they are put through to a call centre. The call centre has a system which automatically processes the phone call before the operator speaks to the customer.

Health and Safety issues often arise through the use of computer equipment at the call centre.

11 (a) Describe **four** measures which could be taken to minimise safety risks.

1 ....

....

2 ....

....

3 ....

....

4 ....

....[4]

(b) Describe **four** different measures which operators could take to minimise health problems. Include in your description the health problem each measure would help to minimise.

1 ....

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2 ....

....

3 ....

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4 ....

....[4]

(c) Describe **five** steps involved in the processing of a customer call by the call centre's automated system.

1 ....

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2 ....

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3 ....

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4 ....

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5 ....

....[5]

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