

CANDIDATE  
NAME

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CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

**9713/12**

Paper 1

**May/June 2016**

**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 blue or black pen.

Do not use staples, paper clips, glue or correction fluid.

You may use an HB 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 **17** printed pages and **3** blank pages.

## **Scenario 1**

### **Questions 1 and 2**

Mytoy is a manufacturing company that specialises in making toys for young children.

Mytoy has a number of sales personnel who take orders for toys from shops which they visit.

Each sales person uses a laptop computer which is loaded with word processing software.

When a sales person takes an order from a shop, a large amount of sensitive information such as details of the shop's bank account is collected. The sales personnel have social and ethical responsibilities when collecting this information.

Mytoy have decided to expand its business by selling direct to the public. Members of the public will be able to telephone their orders to Mytoy's large call centre. Customers will have the option to leave a telephone message stating their requirements. Mytoy may ring back or send an email message if that would be more appropriate.

- 1 (a) Describe each of the following portable devices which a sales person could use and for each one give a different use to which it could be put.

Mobile phone:

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DVD player:

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Satellite navigation system:

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[6]

(b) Describe **three** social or ethical implications that the sales personnel should be aware of when collecting information from the shops.

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[6]

(c) Apart from a word processor, give **three** other types of application software which you would expect to be loaded onto each laptop, describing **two** uses of each. Each use must be different.

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- (ii) Describe how the customer may be able to tell if there is a potential problem with the email.

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..... [3]

**Scenario 2**

**Question 3**

Townbank is a community bank.

For many years, the bank has been very successful, but it has recently been losing customers to banks that offer online banking.

Townbank decide to employ Hardeep, a systems analyst, to oversee the introduction of a new system to their business.



3 (a) Hardeep uses the following methods of data collection to research the present situation. Describe a benefit and a drawback of each method for finding out information in this scenario.

(i) Observation:

Benefit: .....  
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.....  
Drawback: .....  
.....  
..... [2]

(ii) Questionnaires:

Benefit: .....  
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Drawback: .....  
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..... [2]

(iii) Interviews:

Benefit: .....  
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Drawback: .....  
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..... [2]



(c) Describe how the introduction of online banking:

(i) could affect the working patterns of the bank staff.

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..... [3]

(ii) could inconvenience customers.

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**Scenario 3****Questions 4 and 5**

Webuild is a building company which specialises in building blocks of apartments for people to live in. Each apartment has a computer-controlled central heating system installed.

Workers are paid weekly. Webuild's financial department uses a batch processing system to produce the payroll each week.

Webuild keeps stocks of various building materials in its warehouse. It is Cenko's job to ensure that Webuild do not run out of materials. To help her in this task she uses a database. The database contains a number of files, one of which is the ITEM file and another is the SUPPLIER file.

The NumberInStock of any item varies from 50 to 500.

The Price of any item varies from \$20 to \$1000.

The MinimumStock of any item varies from 20 to 100.



(ii) Describe **two** problems that may arise because of the use of sequential access files.

1 .....

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2 .....

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..... [2]

5 The ITEM file contains the following fields:

Field Name	Data Type	Example data
ItemName		Boiler
NumberInStock		236
Price		\$499.95
ItemLocation		06:71:03
MinimumStock		100

The SUPPLIER file contains the following fields:

Field Name	Data Type
SupplierName	
SupplierAddress	
SupplierEmail	
DiscountOnPrice	
OrderPlaced	

(a) Complete **both** tables with the **most appropriate** data types for each field. For each numeric field, specify the numeric type. [5]

(b) In order for the database to work as a relational database at least one more field needs to be added.

Describe this field and explain why this is necessary.

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(c) State and describe **appropriate** validation checks that would be carried out on the ITEM file data as it is entered. You can describe different validation checks for the same field.

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**Scenario 4**

**Question 6**

The government department responsible for education in a particular country is called Edmin.

A group of college teachers has been commissioned by Edmin to produce a detailed report on the teaching of ICT in colleges. The secretary of the group has been asked to type the first draft of the report.

The report is to be circulated electronically to members of the group.









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