

Cambridge
International
AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

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APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

9713/12

Paper 1

May/June 2015

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 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 of each question or part question.

The businesses described in this paper are entirely fictitious.

This document consists of **13** printed pages and **3** blank pages.

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

XYA is a company in a developing country that buys and sells steel. They employ a number of sales staff to phone potential customers in order to sell their steel.

They are seeking to save costs and have asked a number of their sales staff to work from home. Temperatures are fairly low in the winter so sales staff tend to have central heating systems in their homes.

Regular staff meetings are planned to take place using phone conferencing which the manager Ibrahim will organise.

- 1 Tick the **four** statements which are benefits to the company of workers working from home.

	Benefit ✓
Workers will not have to work as hard as if they were in an office	
It is easier to get all the workers together for meetings and briefings	
It would be easier for managers to supervise workers	
Not so much money would have to be spent on the company's utility bills	
There would be no distractions for workers preventing them from working	
Lower costs as company can rent smaller offices	
The workforce would probably be happier so there would be improved motivation to work and increased productivity	
It would be easier to sell steel	
The cost to the company of the phone calls would be cheaper as home phone charges are lower	
More staff would be retained so money would not have to be spent on training new staff	

[4]

- 2 Tick the **four** statements which are benefits to the company of using staff to make phone sales rather than advertising on a website.

	Benefit ✓
You can reach a larger audience by phone than by using a website	
Running a website is cheaper than paying telephone operators	
They can be sure all targeted customers are reached as not everybody will see the website	
Phone calls always result in a successful sale	
They can contact customers whose internet speed is so slow they may not be able to use the website	
They will know accurately how many sales they have made	
You cannot get immediate feedback from your potential customers	
Customers would never buy steel using a website	
Websites can have video and photographs	
It is more personal so it might be easier to persuade customers to purchase steel	

[4]

3 Describe how a microprocessor makes use of the data from a temperature sensor to control a central heating system.

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.....[3]

4 Each sales person would need a PC and a monitor. They will need additional hardware and software to allow them to work from home.

(a) Name, and describe the use of, three additional items of hardware. Each use must be different.

1.....
.....
2.....
.....
3.....
.....[3]

(b) Name, and describe the use of, three items of software. Each use must be different.

1.....
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2.....
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3.....
.....[3]

Scenario 2
Questions 6 and 7

A geography teacher wants to use computers to help students improve their learning and help with her lesson preparation.

Computers will be used by other teachers in their teaching.

6 Describe the use of each of the following types of software that the geography teacher would use to prepare materials for her lessons. Each use must be different.

Spreadsheet

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Web browser

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DTP

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Image editing

.....[4]

7 Discuss the benefits and drawbacks to teachers and students of using computers in lessons to aid teaching and learning.

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.....[6]

Scenario 3**Questions 8, 9, 10, 11 and 12**

RockICT has decided to combine its staff records. It currently has separate computerised personal and payroll details of all its staff.

The payroll system runs using all the data on a weekly basis. Workers are paid according to how many hours they work in a week. On the new system human resources staff will need to be able to access records quickly.

Joanne, a systems analyst, has collected a large amount of information about the existing system. The information will be analysed before the system is designed.

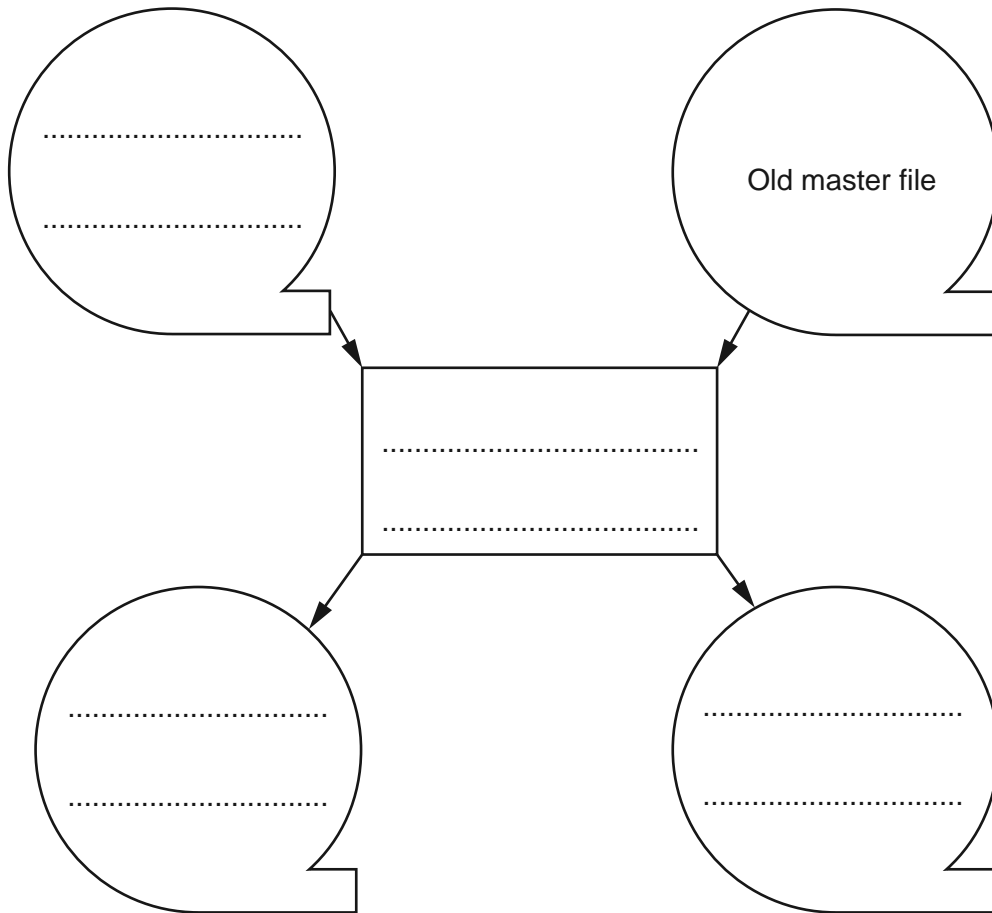
RockICT requires its workers to have a duty of fidelity. It also has to follow government data protection rules when storing data about its workers.

RockICT has hired Arty, an art and design company to produce CD covers for the albums its musicians produce.

8 (a) Give **three** items of information, not related to their pay, that will need to be stored on the master file about each member of RockICT staff.

- 1.....
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- 2.....
.....
- 3.....
.....[3]

(b) Label the components of the following systems flowchart to show how the master file is updated.



[4]

11 (a) Explain what is meant by duty of fidelity.

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.....[2]

(b) Describe **four** rules which would be included in data protection legislation.

1.....
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2.....
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3.....
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4.....
.....[4]

(c) Apart from following data protection rules and having a duty of fidelity, explain the responsibilities of the company and its workers with regard to the privacy of payroll data.

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.....[4]

12 Arty use graphics software to change images that have been imported into the software.

(a) Name and describe **two** input devices which are used to import images for use in the CD covers.

1.....
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2.....
.....[4]

(b) Name and describe **four** features of the graphics software used when changing the images.

1.....
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2.....
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3.....
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4.....
.....[4]

(c) Describe **two** sources of images which would accompany the software when bought.

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

(d) The printing of the CD covers is now computer controlled. Describe **two** effects this had on the workers who used to be involved in the printing process.

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

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