CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

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

Paper 1 **October/November 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 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.

**International Examinations**

**[Turn over**

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

NewProperties are a newly formed house building company that wishes to advertise in the local area. They could create and use:

- Flyers to distribute to houses
- Posters placed in strategic locations
- A website
- A multimedia presentation in a local shopping mall

The company carried out a trial of allowing their house designers to work from home. After the trial it was decided that they would prefer their designers to be office-based in order to work on the design of a new house.

However, a number of workers have asked the manager Bertrand if they can work part-time. Bertrand has agreed providing each worker can find another worker to job share.

Bertrand uses time management software to track the progress of the building of houses at a new site.

John, a foreman, is in charge of the workers at the building site. He uses a smartphone to stay in contact with Bertrand.

**1** There are a number of advantages and disadvantages of using various advertising methods.

For each statement below, tick the **most appropriate** answer.

**(a)** Flyers:

|  | ✓ |
|---|---|
| Flyers are usually produced using presentation software. |  |
| You can distribute them so that they only go to the people you want to see them. |  |
| They are very expensive to produce. |  |
| They can hold more information than a website. |  |

[1]

**(b)** Posters:

|  | ✓ |
|---|---|
| Posters are never defaced. |  |
| Posters are smaller than flyers. |  |
| Posters are produced using a standard printer. |  |
| Posters will not necessarily be noticed by everybody. |  |

[1]

**(c)** Websites:

|  | ✓ |
|---|---|
| A small potential customer base is covered by using a website. |  |
| Paying website designers is much cheaper than producing a flyer. |  |
| Websites are less interactive than posters. |  |
| Websites are easier to update as you do not have to reprint the whole advertisement. |  |

[1]

**(d)** Multimedia presentations:

|  | ✓ |
|---|---|
| Uses sound and video unlike flyers. |  |
| They are produced more quickly than flyers. |  |
| You can cover a wider audience than a website would. |  |
| It would cost less to pay a company to produce this rather than produce their own flyers. |  |

[1]

**2** Tick the **four** statements which are benefits to the company of workers working in the office rather than at home.

| | Benefit ✓ |
|---|---|
| They can pay the workers lower salaries. | |
| 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. | |
| Workers would work longer hours. | |
| Travelling expenses would have to be paid to employees to attend face to face conferences. | |
| Do not have to subsidise home workers' equipment. | |
| Data is more secure as it does not leave the office. | |
| Workers would not have to travel so far to work. | |
| There would be fewer workers. | |

[4]

**3** **(a)** Describe, in detail, what is meant by part-time working.

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**(b)** Describe, in detail, what is meant by job sharing.

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**4 (a)** Describe **two** different types of calendar used with time management.

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**(b)** Two aspects of time management software are shown on the left. Five descriptions are shown on the right.
By drawing **five** lines, connect each aspect to an appropriate description.

| | |
|---|---|
| | software advises when clashes occur |
| | software helps with daily and weekly planning |
| organising meeting times | software provides a critical path method of scheduling |
| project management | software is used to keep a record of appointments |
| | Gantt charts used to represent parallel and sequential activities |

[5]

**5** Name and describe **four** methods of communication that John can use when contacting Bertrand using his smartphone.

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**Scenario 2**
**Questions 6, 7 and 8**

Grafton Mail Order Catalogue Company currently operates by receiving orders from its customers by phone. They have a large call centre for this purpose. Due to the prolonged use of computers there are a number of health and safety issues.

They are going to extend the way they receive orders by having an online system.
The company has a database of customer orders and personal details.

Grafton has employed Oscar to supervise the development of the new system. Oscar has already ruled out using parallel running to implement the new system but is not sure which of the other methods to use.

After the system is implemented Oscar will provide documentation to go with it.

**6 (a)** Identify **two** items of ICT hardware that an operator in the call centre would have at their desk including a description of the purpose of each.

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2 ......................................................................................................................................

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**(b)** Name the **two** different types of call control and describe the type that would be best suited for use in the call centre. Within your description give a reason.

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2 ......................................................................................................................................

Description ......................................................................................................................

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**(c)** Using examples, describe the difference between health risks and safety risks.

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**7** **(a)** Other than security issues, describe **four** drawbacks to the customer of on-line shopping.

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**(b)** Other than security issues, describe **four** drawbacks to the company of introducing on-line shopping.

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**(c)** Apart from not having to travel, describe **four** benefits to the customer of introducing on-line shopping.

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**8 (a)** When introducing a new computer system, phased implementation or direct changeover can be used.

Describe each method and for each method, give **one** different advantage and disadvantage compared with parallel running.

Phased
implementation ..........................................................................................................................

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Advantage ...............................................................................................................................

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Disadvantage ..........................................................................................................................

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Direct changeover ...................................................................................................................

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Advantage ...............................................................................................................................

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Disadvantage ..........................................................................................................................

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**(b)** Describe **four** items of program documentation that Oscar will provide.

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**Scenario 3**
**Questions 9 and 10**

Omar is the owner of a small company which manufactures computers. He wishes to computerise the stock control of his business.

He needs a system which will store records of all the computers his company makes. From time to time he will need database reports to give him information about the computers he has in stock.

Examples of serial numbers for the computers are T123456, L342167, and P789456. The first letter in the serial number is the type of computer and the first digit in the serial number is the manufacturer's number.

He currently uses a spreadsheet to store serial numbers as:

|   | A | B | C |
|---|---|---|---|
| **1** | Serial Number | Type | Manufacturer's number |
| **2** |  |  |  |
| **3** | T123456 | T | 1 |
| **4** | L342167 | L | 3 |
| **5** | P789456 | P | 7 |

Formulas are used in columns B and C to extract the data from the serial number.

As well as the serial number, the new system will store the price of each computer. His basic model, which is the cheapest, sells for $300. The Impressor, which is the most expensive, sells for $1500. He only sells tablet computers, laptops and PCs.

He has asked Louisa, a systems analyst, to analyse the current system and then design a new one.

**9 (a)** Write down the formula which Omar has used in cell B3.

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**(b)** Write down the formula which Omar has used in cell C3.

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**10 (a)** Using the data given in the scenario, describe **three** validation rules which would be designed to check whether the data is acceptable or not.

Rule 1 .............................................................................................................................

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Rule 2 .............................................................................................................................

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Rule 3 .............................................................................................................................

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**(b)** Discuss the benefits and drawbacks of interviews, questionnaires and observation for collecting information about the existing system.

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**(c)** Describe **four** features of a well-designed report.

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 **(d)** Louisa is recommending the use of an inkjet printer for printing the reports. Give **two** reasons, compared to other printers, why she has done this.

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 2 ...........................................................................................................................................

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**16**

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