CANDIDATE
NAME

CENTRE
NUMBER

CANDIDATE
NUMBER

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/13**

Paper 1 **October/November 2015**

2 hours

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.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

No marks will be awarded for using brand names of software packages or hardware.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **12** printed pages.

1   Many word processing packages have a number of formatting features.

Write down **six** of these features which have been used in the following passage.

> The boiling point of **water**, H_2O, at normal atmospheric pressure is 100°C. The two elements which make up water are Hydrogen and Oxygen. Water covers seventy percent of the surface of the earth. In different parts of the world, water can be found in liquid, solid, and gaseous forms. In its liquid form it is tasteless and odourless and more or less colourless. Many substances dissolve in water and because of this it is commonly referred to as the *universal solvent*.

1   ....

2   ....

3   ....

4   ....

5   ....

6   ....

[6]

2   Tick the **most** appropriate method of inputting data for the following uses.

Use	Web cam ✓	Keyboard ✓	Scanner ✓
Applications where text has to be created rather than copied			
Inputting hard copy documents directly into a computer			
Inputting moving pictures from a fixed position into a computer			
Entering text directly into a word processing document			

[4]

3 Explain what is meant by the following terms, giving examples of their use.

MICR ....

....

....

....

OMR..

....

....

.... **[4]**

4 When creating a database, it is important to assign the correct data type to each field.

Tick the most appropriate data type for each of the following items of data.

	Numeric ✓	Date ✓	Text (alphanumeric) ✓
A student's name			
How many times a student has been late to a lesson			
The amount of money it costs to travel to school			
When the end of term is			

[4]

5 Complete each sentence using the **most** appropriate words from the following list.

a word processor	a control program	a spreadsheet

an inference engine	a web authoring package	a search engine

a measuring program	a DTP package	

(a) The software used to find information on the internet is..
[1]

(b) The software which is a component of an expert system is ....
[1]

(c) The type of software used to create financial models is ....
[1]

6 Explain, using examples, what is meant by authentication techniques.

....

....

....

....

....

.... **[3]**

7 Give **three** reasons why it would **not** be sensible to use batch processing in an online theatre booking system.

1 ....

....

2 ....

....

3 ....

....
[3]

8 A floor turtle can use a number of instructions.

For each of the following instructions give the correct meaning.

FORWARD *n*...

....

REPEAT *n*...

....

LEFT *t*...

....

RIGHT *t*...

....

PENUP...

....

PENDOWN ....

....
                                                                                                                            [6]

9 A chemistry student wants to measure how quickly a liquid cools after it has boiled. She will use a sensor connected to a computer to do this.

(a) Identify **two** variables which will need to be recorded.

1..

2..

[2]

(b) Describe how the computer would process the data into a form the student could use to analyse the results.

....

....

....

....

....

....

....

....

....

....

[5]

10 Describe the differences in use between WiFi and Bluetooth.

....

....

....

....

....

....

....

[4]

11 Compare and contrast the use of optical discs and the use of fixed magnetic disks to store data.

....

....

....

....

....

....

....

....

....

....

.... **[6]**

12 Most supermarkets now operate online shopping.

Discuss the advantages and disadvantages to supermarkets of this development.

....

....

....

....

....

....

....

....

....

....

.... **[6]**

13 A company is going to introduce a new computer system.
The company employs drivers to deliver orders and they are rarely in the office for more than a few minutes. The office secretaries process the orders and dislike being interrupted. A manager is in charge of the current system and appointments can be made to see her.

(a) Name **three** methods of researching the current system other than from examining documents.

Identify the workers that each method would be most suitable for. Each method will be used with a different type of worker.

1 ....

....

....

2 ....

....

....

3 ....

....

....

[6]

(b) After the current system has been researched, the new system will be designed. This means that the file structure will be designed.

Identify **three** items of a flat file structure which will form part of this activity.

1 ....

2 ....

3 ....

[3]

14 A student types in the formula =IF(A1>12,"strong",IF(A1>6,"medium","weak")) into a spreadsheet.

(a) Explain, using the terms 'condition', 'true', 'false', how this nested IF function works.

....

....

....

....

....

....

....

.... **[4]**

(b) Another student wishes to reverse the formula to get the same result.
She types in the formula IF(A1<6,"weak",IF(A1<12,"medium","strong)

Identify **four** errors she has made.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

(c) Financial models and scientific experiments are examples of different types of modelling applications.

Give **three** other examples of types of modelling.

1 ....

....

2 ....

....

3 ....

....
[3]

15 Students at a school visit a variety of websites on the internet to get information about a topic.

(a) Describe **four** features of a website that will prove that the information found on it is reliable.

1 ....

....

2 ....

....

3 ....

....

4 ....

....
[4]

(b) Describe **three** other features of a website that may indicate that the information found on it is **not** likely to be reliable.

1 ....

....

2 ....

....

3 ....

....
[3]

(c) In order to make reliable information available to all students, schools often put the information on their intranet.

Describe what is meant by an intranet.

....

....

....

....

....

....

....

.... **[4]**

16 Give **four** benefits of using social networking sites.

1 ....

....

2 ....

....

3 ....

....

4 ....

....
                                                                                                                          [4]

17 There are many health issues associated with the use of computers.

Name **three** of these health issues and for each one describe, in detail, a different cause.

Health issue 1 ....

Cause ....

....

Health issue 2 ....

Cause ....

....

Health issue 3 ....

Cause ....

....

[6]

18 Tick **three** features of wikis.

	✓
A wiki is an example of a spreadsheet.	
A wiki is quicker to search than a database.	
Wiki entries are in chronological order.	
A wiki can have several contributors.	
Wikis are always a reliable source of information.	
Wikis can be edited using a web browser.	
Anybody can create a wiki.	
Wikis never contain hyperlinks.	

[3]