GCE A level

1243/01

INFORMATION AND COMMUNICATION TECHNOLOGY – IT3
Use and Impact of ICT

P.M. TUESDAY, 11 June 2013

2½ hours

Suitable for Modified Language Candidates

ADDITIONAL MATERIALS

You will need a WJEC 20-page booklet (pink), which has been specifically designed for this examination. No other style of answer booklet should be used. Should you run out of space, use a standard 4 page continuation booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use a gel pen or correction fluid.

Answer **all** questions in Section A and **one** question group in Section B.

Use both sides of the paper. Write only within the white areas of the book.

Write the question number in the two boxes in the left hand margin at the start of each answer.

Leave at least two line spaces between each answer.

The intended marks for questions or part questions are given in brackets [ ]. You are advised to divide your time accordingly. The total number of marks available is 90.

You are reminded of the necessity for good written communication and orderly presentation in your answers.

Quality of written communication will be assessed in question 13.

SECTION A

*Answer **all** questions.*

0 1	Describe **four** factors that should be taken into account when designing a Human Computer Interface (HCI) that could be used by a young child learning to read. [4]
0 2	A good HCI is important. Discuss the different requirements of *an expert user* and *an adult novice user.* Describe how a well designed HCI can satisfy these needs. [6]
0 3	A national bank wants to ensure that its financial systems are secure against attack. Describe **four** factors that should be included in the bank's security policy. Do not describe *code of conduct* in your answer. [8]
0 4	An international company makes use of *File Transfer Protocols* (FTPs). Describe in detail what is meant by FTP. Give **one** example of its use and describe **one** advantage for the company. [4]
0 5	A company is considering changing its network. Describe in detail **three** factors that will influence the choice of a network. Do not describe *topology issues* in your answer. [6]
0 6	A small business only has *dialup* access to the Internet. It is considering signing up for *broadband.* Discuss the relative advantages and disadvantages that dialup and broadband give the business. [4]
0 7	A network manager uses *remote management* when managing the network. Describe **four** tasks that the network manager could do using remote management. [4]
0 8	Changes in modern technology have led to an increase in teleworking. Discuss the advantages and disadvantages to **both** employees and employers of teleworking. [8]
0 9	The Internet has helped the increase in distributed computing. Explain what is meant by *distributed computing.* [3]
1 0	Describe briefly an application which uses distributed computing. [2]
1 1	Discuss the advantages and disadvantages of distributed computing. [4]
1 2	Most organisations could not operate without a good Management Information System (MIS). Define what is meant by an MIS. Describe the factors which make an MIS good or poor. [10]
1 3	A systems analyst is investigating a company with regard to creating a new ICT system. Describe **three** methods she would use to gather information about the existing system. [9]

SECTION B

*Answer **either** question 14 **or** questions 15 to 19.*

| 1 | 4 | "*The growth in social networking sites and other entertainment sites has led to many concerns about the privacy, security and abuse of personal data on the Internet.*" |

Describe some of these concerns. Use suitable different *examples* in your answer.

[18]

| 1 | 5 | A Hospital uses a relational database for storing patient records. Explain what is meant by a relational database. [2] |

| 1 | 6 | *Data consistency, Data redundancy, Data integrity* and *Data independence* are all terms associated with relational databases. Explain what each of these **four** terms means. [4] |

| 1 | 7 | Consultants and patients are allocated to wards but each patient has only one consultant and each ward has their own consultant. One table in this database could be: |

    WARD(Wardid, WardName, NumOfBeds)

With Wardid being the primary key.

Give **two** other suitable tables you could expect to see in this database, identifying any primary or foreign key. [6]

| 1 | 8 | Describe what a *data warehouse* is and give an example of how a company might use it. [3] |

| 1 | 9 | Explain what is meant by data mining. Give a detailed example of how a company might use it. [3] |