GCE A level

wjec cbac

1243/01

INFORMATION AND COMMUNICATION TECHNOLOGY – IT3
Use and Impact of ICT

A.M. TUESDAY, 23 June 2015

2 hours 30 minutes

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 12.

SECTION A

*Answer **all** questions.*

| 0 | 1 | Other than *layout appropriate to task* and *use by disabled people*, describe, **in detail**, **three** *other* factors that should be taken into account when designing a good user interface. [3×2] |

| 0 | 2 | Describe **five** examples of how a suitable *Human Computer Interface (HCI)* can meet the needs of disabled users. *In your answer you must state the disability or need*. [5] |

| 0 | 3 | An organisation uses *File Transfer Protocol (FTP)*. Give **two** specific uses an organisation can make of FTP and give **two** advantages for the organisation of using FTP. [4] |

| 0 | 4 | A system analyst has been asked to update a company's network. Discuss the relative advantages and disadvantages of **peer-to-peer** and **client server** network configuration he would include in his feasibility report. [6] |

| 0 | 5 | The network infrastructure of a school needs updating. The network manager is considering installing a wireless network. Discuss the advantages and disadvantages to the school of using a wireless network. [4] |

| 0 | 6 | The school is based on a number of sites and consequently the network manager needs to use remote management to simplify his job. Describe **five** tasks that the network manager could carry out using remote management. [5] |

| 0 | 7 | Discuss the *advantages* and *disadvantages* videoconferencing brings to an organisation or its employees. [5] |

| 0 | 8 | A system analyst has been employed by a council to produce a new computer based system to replace the system currently running their central lending library. *Other than observation*, describe **two** methods the analyst could use to investigate their current system. [2×3] |

| 0 | 9 | A financial institution has a 'code of conduct' for all its employees who use its ICT systems. Describe **five** guidelines it should contain, *other than the consequences of breaking the code*. [5] |

| 1 | 0 | A doctors' practice has installed a new computer system to help run the practice. Once this system is up and running, it has to be maintained. Describe **three** different methods of *system maintenance* and illustrate **each** method with appropriate examples. [3×3] |

| 1 | 1 | *Other than establishing a code of conduct*, discuss **five** possible *operational procedures* which could be introduced to prevent the misuse of data. Use distinct examples to illustrate these procedures. [5×2] |

| 1 | 2 | *'The Internet is worldwide and for everyone. No-one owns it or controls the Internet.'* Discuss this statement and illustrate your arguments with different examples. [8] |

SECTION B

*Answer **either** questions 13 to 14 **or** questions 15 to 18.*

| 1 | 3 | Companies and their customers are increasingly dependent on electronic information. The security of electronic data is very important to every company and their customers. |

Describe **three** *different* types of threat to a company's data and illustrate **each** type of threat with a **different** *detailed example*. For **each** of the different threats, describe a *distinctly different* consequence for a company or its customers, should the security of the data be compromised or the data destroyed. [3×3]

| 1 | 4 | Organisations find that having an ineffective *Management Information System* (MIS) can be counter-productive. Describe, in detail, **four** factors that can help prevent a MIS being non-effective. [4×2] |

| 1 | 5 | Organisations now store vast amounts of data in normalised form in relational databases. This data is used as a data warehouse and is mined to aid decision making. Explain what is meant by: |

- Data normalisation
- Relational database
- Data warehouse
- Data mining. [6]

| 1 | 6 | A relational database approach has many advantages, including increased security. Describe the positive security implications of a relational database over other types of databases. [2] |

| 1 | 7 | Give **one** advantage of using a data warehouse and **one** detailed advantage of data mining to an organisation. [3] |

| 1 | 8 | Distributed databases are used by some hotel chains. Describe **two** benefits to a hotel chain of using a distributed database and describe **two** *security issues* associated with distributed databases for the hotel chain. Suggest a *different* method the hotel chain could use for overcoming **each** of these issues. [6] |

END OF PAPER