



# Professional Qualification in COMPUTING AND INFORMATION SYSTEMS

## Level 4 Diploma

### UNIT 2 – COMPUTER PROGRAMMING

#### Question 1

One of your commercial clients manufactures various household items and has asked you to produce a suite of programmes to handle their stock control. **Identify** which programming language you would recommend and **describe** how its features would make it suitable for this task. (20 marks)

#### Question 2

(a) Using examples, **explain** how Boolean and floating point data types are used in scientific programming. (8 marks)

(b) **Illustrate** the programming constructs of sequence, selection and iteration. (12 marks)

#### Question 3

(a) **Describe** the process of compiling a programme written in a high-level language into executable form. (10 marks)

(b) **Describe** the role CPU architecture plays in the compilation and execution processes. (10 marks)

#### Question 4

(a) Using examples, **illustrate** how the use of trace tables supports code tracing. (10 marks)

(b) Using examples, **explain** the difference between a pointer and a value. (10 marks)

#### Question 5

Using examples to support your answer, **describe** the advantages and disadvantages of the object-orientated paradigm versus imperative and functional. (20 marks)