



Professional Qualification in COMPUTING AND INFORMATION SYSTEMS

Level 4 Diploma

UNIT 2 – COMPUTER PROGRAMMING

Question 1

- (a) **State** what is meant by the term 'programming language'. (4 marks)
- (b) **Describe TWO** differences between object-orientated languages and functional languages. (8 marks)
- (c) **Describe** the strengths and weaknesses of using Java for client-server web applications. (8 marks)

Question 2

- (a) **State** what is meant by the term 'primitive data type'. (4 marks)
- (b) **Describe** how textual data is stored in computer memory. (8 marks)
- (c) **Explain** the **TWO** programming constructs of selection and iteration. (8 marks)

Question 3

- (a) **State** what is meant by the term 'source code'. (4 marks)
- (b) **Describe** the process of source code compilation. (8 marks)
- (c) **Describe** the fetch-execute cycle. (8 marks)

Question 4

- (a) **State** what is meant by the term 'function' when writing source code. (4 marks)
- (b) **Describe** the advantages and disadvantages of using flow charts and pseudo-code to design programme solutions. (8 marks)
- (c) **Describe** examples of where pointers and values are used by programmers. (8 marks)

Question 5

- (a) **State** what is meant by the term 'inheritance' in object-orientated programming. (4 marks)
- (b) **Describe** the differences between a class, an object and an instance. (8 marks)
- (c) **Describe** examples of object-orientated design considerations. (8 marks)