



Professional Qualification in
COMPUTING AND INFORMATION SYSTEMS
Level 4 Diploma

UNIT 2 – COMPUTER PROGRAMMING

Question 1

- (a) **Describe** the features of a programming language with which you are familiar. (8 marks)
- (b) With reference to your answer to Question 1a, **discuss** the suitability of the selected programming language for client-side web scripting. (12 marks)

Question 2

- (a) **Write** an example of **TWO** different primitive data types and **describe** how they are used in applications. (10 marks)
- (b) **Illustrate** how array data structures are used in programming. (10 marks)

Question 3

- (a) **Describe** the roles of source code and machine code in program execution. (10 marks)
- (b) **Explain** how the stages of the fetch-execute cycle enable a program to be executed. (10 marks)

Question 4

- (a) **Illustrate** how a flowchart can be used as an aid to program design. (10 marks)
- (b) Using examples, **describe** the advantages and disadvantages of using a flowchart technique compared with pseudo-code when designing programs. (10 marks)

Question 5

Describe FOUR object-orientated concepts and constructs and provide examples of each to show their usage in programming. (20 marks)