



**Professional Qualification in**  
**COMPUTING AND INFORMATION SYSTEMS**  
**Level 4 Diploma**

**UNIT 3 – INFORMATION SYSTEMS ANALYSIS AND DESIGN**

Question 1

Compare and contrast iterative and non-iterative approaches to change management. (10 marks)

Question 2

- (a) State what is meant by the phrase 'phased-life cycle approach' in realising deliverable. (2 marks)
- (b) Identify **TWO** phases of a phased-life cycle approach to a Management Information System project. (4 marks)
- (c) Identify **TWO** benefits of using a phased-life cycle approach. (4 marks)

Question 3

Discuss the role of a systems analyst in an information systems project. (10 marks)

Question 4

- (a) State what is meant by the term 'employability skills'. (2 marks)
- (b) Identify **TWO** key employability skills of a systems analyst. (4 marks)
- (c) Identify **TWO** benefits of continuous professional development. (4 marks)

Question 5

- (a) Describe the need for business intelligence reporting in an information system. (5 marks)
- (b) Analyse the functional requirements of an information system. (5 marks)

Question 6

- (a) State what is meant by 'UML use-case diagram'. (2 marks)
- (b) Illustrate **TWO** features of a UML use-case diagram. (4 marks)
- (c) Identify **TWO** reasons why software engineers use UML use-case diagrams. (4 marks)

#### Question 7

- (a) Explain how Data Flow diagrams are used to model information communication. (5 marks)
- (b) Describe the benefits of Data Flow diagrams to software engineers. (5 marks)

#### Question 8

- (a) Explain how a software engineer may use diagrams to define the boundaries between a proposed system and its environment. (5 marks)
- (b) Illustrate how data may flow in a simple system to calculate payroll. (5 marks)

#### Question 9

State what is meant by each of the following SMART objectives in the context of an information system project:

- (a) Specific. (2 marks)
- (b) Measurable. (2 marks)
- (c) Achievable. (2 marks)
- (d) Realistic. (2 marks)
- (e) Time-bound. (2 marks)

#### Question 10

Compare and contrast the Prince2 and Critical Path Method project management methodologies (10 marks)