



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

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

Question 1

(a) Describe the Rapid Application Development (RAD) life cycle model for systems development. (5 marks)

(b) Describe the Prototyping life cycle model for systems development. (5 marks)

Question 2

(a) Describe the advantages of the SCRUM systems development model. (5 marks)

(b) Describe the disadvantages of the SCRUM systems development model. (5 marks)

Question 3

(a) Explain the skills needed to undertake a feasibility study. (5 marks)

(b) Explain the skills needed to undertake an evaluation of information systems. (5 marks)

Question 4

Describe the advantage of each of the following requirements gathering techniques:

(a) Observation. (5 marks)

(b) Use-cases. (5 marks)

Question 5

Discuss the importance of key employability skills and the continuing professional development required to develop them. (10 marks)

#### Question 6

(a) Identify **THREE** different categories of requirements that projects may have. ( 6 marks)

(b) Identify **TWO** different categories of requirements in information systems. (4 marks)

#### Question 7

Analyse and illustrate the requirements of common information systems. (10 marks)

#### Question 8

(a) Draw a systems data flow diagram to illustrate the flow of information between two agents. (5 marks)

(b) Illustrate the data flow of an information system, using examples to support your answer. (5 marks)

#### Question 9

(a) Describe the benefits of having SMART objectives. (5 marks)

(b) Explain how to select an appropriate methodology for a project with rapidly changing requirements. (5 marks)

#### Question 10

Describe the benefits of each of the following project management tools: (a) A GANTT chart. (5 marks)

(b) A FISHBONE diagram. (5 marks)