



Professional Qualification in COMPUTER ENGINEERING Level 4 Diploma

UNIT 4 – NETWORKING TECHNOLOGY

Question 1

- (a) Describe how data collisions can be detected by a packet sniffer. (3 marks)
- (b) Compare THREE key differences between software and hardware switching. (3 marks)
- (c) Explain the function of the data link layer. (14 marks)

Question 2

- (a) Compare THREE key differences between static and dynamic IP addressing. (3 marks)
- (b) Describe how the traceroute utility can be used to verify Internet paths. (3 marks)
- (c) Explain the responsibilities of the network layer. (14 marks)

Question 3

- (a) Assess THREE differences between UDP and TCP. (6 marks)
- (b) Explain how link reliability is maintained by the transport layer. (14 marks)

Question 4

- (a) Contrast the OSI Model and TCP/IP. (6 marks)
- (b) Discuss why media streaming is handled at the session layer. (14 marks)

Question 5

Explain the design of a Public Key Infrastructure (PKI) encryption system. (20 marks)