



Professional Qualification in
COMPUTER ENGINEERING
Level 4 Diploma

UNIT 4 – NETWORKING TECHNOLOGY

Question 1

- (a) **Describe** the purpose of the physical and data link layers in terms of electrical and physical specification of devices. (10 marks)
- (b) **Explain** the role of signal modulation in data transmission. (10 marks)

Question 2

- (a) **Describe** the features and uses of Internet Protocol addresses. (10 marks)
- (b) **Describe** the usage of Internet Control Message Protocol packets in the network layer. (10 marks)

Question 3

- (a) **Describe** the purpose of the transport layer. (10 marks)
- (b) **Describe** the use of the Transmission Control Protocol in network communications. (10 marks)

Question 4

Compare and **contrast** the features of the OSI model and TCP/IP. (20 marks)

Question 5

- (a) **State** what is meant by the term 'firewall'. (4 marks)
- (b) **Describe** the difference between stateful and stateless packet inspection. (8 marks)
- (c) **Describe TWO** security benefits of Network Address Translation. (8 marks)