



Professional Qualification in COMPUTER ENGINEERING

Level 4 Diploma

UNIT 4 – NETWORKING TECHNOLOGY

Question 1

- (a) **Explain** what is meant by the term 'OSI 7-layer network model'. (4 marks)
- (b) **Explain** the purpose of the OSI 7-layer network model. (16 marks)

Question 2

- (a) **Describe TWO** design features of IPv4. (10 marks)
- (b) **Describe TWO** design features of IPv6. (10 marks)

Question 3

- (a) **Explain TWO** ways in which encryption could help to ensure privacy. (4 marks)
- (b) **Suggest** the extent to which WPA-PSK wireless security configurations ensure private communication. (16 marks)

Question 4

- (a) **Explain ONE** purpose of the transport layer of the OSI model. (4 marks)
- (b) **Compare TWO** advantages of the User Datagram Protocol (UDP). (16 marks)

Question 5

Illustrate how a packet containing ASCII-coded data could be transformed into UTF16-coded data. Use diagrams and/or examples to support your answer. (20 marks)