



Professional Qualification in
COMPUTER ENGINEERING
Level 4 Diploma

UNIT 4 – NETWORKING TECHNOLOGY

Question 1

- (a) **Describe TWO** functions of the physical layer of the OSI 7-layer network model. (10 marks)
- (b) **Explain** how the physical layer is incorporated in Ethernet. (10 marks)

Question 2

- (a) **State** the function of an IP address. (6 marks)
- (b) **Explain** the purpose of dynamic IP addressing. (6 marks)
- (c) **Describe** the relative benefits of static and dynamic IP addressing. (8 marks)

Question 3

- (a) **State** what is meant by the term 'multiplexing'. (6 marks)
- (b) **Explain** the purpose of the transport layer. (6 marks)
- (c) **Discuss** the benefits of multiplexing in the transport layer. (8 marks)

Question 4

- (a) **Explain** why media streaming is handled in the session layer. (10 marks)
- (b) **Compare TWO** features of TCP/IP and the OSI model. (10 marks)

Question 5

- (a) **State** what is meant by Address Resolution Protocol (ARP) poisoning. (6 marks)
- (b) **State** what is meant by the term 'sniffing'. (6 marks)
- (c) **Describe** a method of mitigating against sniffing attacks. (8 marks)