



Professional Qualification in
COMPUTER ENGINEERING
Level 4 Diploma

UNIT 4 – NETWORKING TECHNOLOGY

Question 1

(a) **Describe TWO** classes of connection-mode transport protocols used in the Transport Layer. (10 marks)

(b) **Describe** the application layer protocols HTTP and DNS. (10 marks)

Question 2

(a) **Explain** how the session layer controls the connections between computers. (10 marks)

(b) **Compare** and **contrast** the authentication control features of the OSI model with TCP/IP. (10 marks)

Question 3

Explain the purpose of the presentation layer and how it connects entities and controls information delivery, formatting and encryption. (20 marks)

Question 4

(a) **Describe TWO** proprietary sniffers with which you are familiar and how they confirm correct networking function. (10 marks)

(b) **Discuss** the process of confirming that packets are correctly routed. (10 marks)

Question 5

(a) **Discuss** the relative merits of filtering network traffic by IP address, domain name, protocols, ports and specific words and phrases. (10 marks)

(b) **Discuss** the use of NAT on IPv6 networks and the relative benefits and problems compared to IPv4 deployment. (10 marks)