



**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. (2 marks)
- (b) **Explain** the purpose of **EACH** layer in the OSI 7-layer network model. (18 marks)

Question 2

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

Question 3

- (a) **Explain** what is meant by the term 'packet'. (4 marks)
- (b) **Differentiate** between the TCP and UDP protocols. (16 marks)

Question 4

Suggest why the session layer is absent from the TCP/IP model. (20 marks)

Question 5

- (a) **Explain TWO** ways in which encryption can help to ensure privacy. (8 marks)
- (b) **Distinguish** how the WEP and WPA-PSK wireless security configurations ensure (or fail to ensure) private communication. (12 marks)