



COMPUTER ENGINEERING

Level 4 Diploma

UNIT 2 – COMPUTER SECURITY

Question 1

- (a) Explain the operation of a 'brute force' attack. (8 marks)
- (b) Describe at least TWO techniques that can be used to reduce the threat of 'brute force' attacks. (12 marks)

Question 2

- (a) State the major threats to computer security from the local area network (LAN). (10 marks)
- (b) Produce a strategy to mitigate such threats. (10 marks)

Question 3

Evaluate the value of an intrusion detection system in preventing malicious activity on a computer network. (20 marks)

Question 4

Explain the 'man in the middle' attack and how to protect against this type of attack. (20 marks)

Question 5

Analyse how Address Resolution Protocol (ARP) attacks on a computer network can be used to manipulate network traffic. (20 marks)

Question 6

- (a) Explain the differences between a router and a hub. (10 marks)
- (b) Evaluate the security implications of using one over another. (10 marks)

Question 7

Discuss why a zero-day or zero-hour attack is such a major threat to computer security and how such techniques can be limited in their effectiveness. (20 marks)