



Professional Qualification in
COMPUTER ENGINEERING
Level 4 Diploma

UNIT 2 – COMPUTER SECURITY

Question 1

- (a) State what is meant by the term 'SQL injection'. (2 marks)
- (b) Describe how an SQL injection is performed. (6 marks)
- (c) Illustrate the consequences of an SQL injection. Use diagrams and/or examples to support your answer. (12 marks)

Question 2

- (a) Explain what an attack vector is. (6 marks)
- (b) Describe how viruses infect a computer system. (6 marks)
- (c) Compare why email and external media are popular attack vectors. (8 marks)

Question 3

- (a) State what is meant by the term 'key logger'. (2 marks)
- (b) Describe how key loggers function. (6 marks)
- (c) Explain why TWO key loggers can be effective. (12 marks)

Question 4

- (a) State the meaning of the term 'password strength'. (2 marks)
- (b) Explain why it is important to ensure computer users have strong passwords. (6 marks)
- (c) Illustrate how a password can be made stronger. Give THREE examples. (12 marks)

Question 5

Illustrate how firewalls protect a computer system against attacks. Use diagrams and/or examples to support your answer. (20 marks)