



(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR THREE SEMESTER TWO EXAMINATIONS**

**FOR THE DEGREE OF
BACHELOR OF SCIENCE COMPUTER SCIENCE**

COURSE CODE : CSC 373E

COURSE TITLE : SECURITY IN OS AND DATABASE

DATE: 17/10/2018 TIME: 11:30 A.M – 1:30 P.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE [COMPULSORY] [30 MARKS]

1. What do you understand by the term file attributes? [3 marks]
2. Define Access control [1 mark]
3. Explain how sharing files on a network can lead to security Risks. [4 marks]
4. Memory management is one of the major functions of the Operating system. Describe issues involved in the memory management. [8 marks]
5. Explain the role of the government in ensuring IT security. [4 marks]

QUESTION TWO [20 MARKS]

1. Describe malicious software with examples [4 marks]
2. What is an operating system? How is it related to computer hardware? [3 marks]
3. List any five best practices you can apply when using FTP [5 marks]
4. State and explain eight characteristics features of an operating system [4 marks]
5. Define Buffer Overrun [2 marks]
6. Which injection attack is mostly commonly used to access databases and the networks they reside on? [2 marks]
 - A: Email injection
 - B: SQL injection
 - C: OS injection
 - D: LDAP injection

QUESTION THREE [20 MARKS]

1. Describe the three layers of the operating system. [6 marks]
2. Explain the main functions of the Operating System [10 marks]
3. Should we encrypt the SQL Server datatabase backups? Reason. [4 marks]

QUESTION FOUR [20 MARKS]

1. Define the term Multiprogramming [1 mark]
2. State and explain the three components of an operating system security environment. [6 marks]
3. As a system administrator explain the advantages of performing data backup. [4 marks]
4. Which injection attack is mostly commonly used to access databases and the networks they reside on? [1 mark]
 - A: Email injection
 - B: SQL injection
 - C: OS injection
 - D: LDAP injection
5. List any four basic steps that you could apply to harden an operating system. [4 marks]
6. Define Multi-level Security [2 marks]
7. Define Intrusion Detection System. [2 marks]

QUESTION FIVE [20 MARKS]

1. List any five methods that one can use to obtain a password from a computer [5 marks]
2. What is a deadlock? Explain concept of critical region and deadlock handling. [7 marks]
3. Explain how Hardware, software, data and communications can be protected from vulnerability. [8 marks]