Computer Sciences
University of Technology

Date: 22/5/2012
Time: 3
Lecturer: Dr.Hala Bahjat

Final Exam. 2011-2012
First trail

Subject: Principles of Security
Class: First
Branch : Security

Note: choose five questions only

Q1) Define the following:

a- Cracking, b- Security, c- Trust provider, d- Boot sector, e- E-mail viruses
f- Access control.

(12 marks)

Q2) a- Write the requirements that must satisfy by any cryptographic system.

b- Write complete algorithm for playfair method and {update playfair algorithm with new rules}, test it by complete example.

(12 marks)

Q3) a- encipher the following massage" **good luck to all**" using *vigener table only*, when you know the key= "**yes**".

b- Explain password authentication, and show the ways that password authentication fail in it.

Q4) Answer the following questions:-

a- explain the firewall concepts and definitions.

b- comparison between the firewall as software and firewall as hardware by using design only.

c- The condition that must considered in firewalls.

(12 marks)

Q5) a- Decipher the following cipher text=**REEEIQODAWNTI I**, when you know that two encryption methods are used, first one is simple transposition where the key=**4376215,** and the second one is keyword method where the key=**thank you**.

b-Explain the virus propagation and give the common types for virus attacks.

(12 marks)

Q6) Give short answer for the following questions:

a-

1- Why administrators often fail to implement security features in operating systems.

2- How can solve the direct intrusion problem.

3- Explain the Permissions-Based Access Control System works? Give short example.

4- Explain Vectors that hackers exploit to access your network (in steps only).

b- Explain the key management problem in symmetric key system, and the solutions for this problem.

(12 marks)