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 message "good luck to all" using vigenere 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, 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)