Duration: 2 Hours   Maximum Marks:75

Attempt any 4 Questions.
All questions carry equal marks

Q1.   What are the security issues of Windows XP operating system? Suppose IT chief security officer of an organization purchase a highly secure system "Alarm Logic" to meet their security needs. This system works as a gateway to the Organization from outside network by sending alert to the security portal of that organization. What type of system is "Alarm Logic"? Describe the functioning of this "Alarm logic" security system.

Q2.   Describe various stages and tools of Hacking . Distinguish between Hacking and Phishing.
Suppose, you have created a website. Some vulnerabilities are reported by exposing and exploiting that website in order to discover its weaknesses. What types of vulnerabilities can be there? List them and explain various ways to fix these vulnerabilities in order to make the website more secure?

Q3.   Differentiate between false positive and false negative biometric authentication? Why biometrics are more secure than password? What are the frauds which are possible in biometric authentication? Describe in your own words.

Q4.   Differentiate between the following techniques with suitable examples of each.
(a) Symmetric and Asymmetric encryption
(b) Substitution and Transposition cipher

Encrypt the following plain text using
(a) Caesar cipher
(b) Rail fence cipher(key=exam)

Plain text: Online mode of Examination

Q5.   Describe various types of cyber crimes. Differentiate between Section 67 and 67 A of IT Act 2008.
Suppose a person fraudulently or dishonestly make use of electronic signature and/or password   of other person. Which   section of IT Act 2008 will be applicable in this case and what are the penalties and punishments under this section?

Q6.   What is the difference between electronic signature and digital signature? Explain How do you authenticate an electronic document using digital signature. Assume that Alex is able to observe all messages exchanged between Bob and Cina. Alex knows only public key. Explain how Cina will detect the following attack using digital signature .

Bob sends a message x = "Transfer $1000 to Mike" to Cina. Alex intercepts the message and replaces "Mike" with "Alex".