Total No. of Questions : 5] *[Total No. of Printed Pages : 2*

Roll No .....

CS-7101

B.E. VII Semester

Examination, December 2016

Network and Web Security

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each questions are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.
v) Assume suitable value for missing data, if any.

1. a) Define different categories of security attacks.
   b) Briefly explain available tools of intrusion detection tools.
   c) Describe various type of intrusion detection system.
   d) How to perform penetration testing in intrusion Detection System? What are the requirements of System Integrity verifier in intrusion Detection System?

   OR

   Differentiate the following terms with the help of suitable example :
   i) Computer Security and Cyber Security
   ii) Security Threats and Attack
   iii) Security Services and mechanisms.

2. a) Write principal of cryptography techniques.
   b) Define various methods for key management.
   c) Explain RC4 cipher with the help of suitable example.

   d) Define encryption and decryption is RSA algorithm using suitable example and how to determine the strength of RSA algorithm?

   OR

   Briefly discuss the Diffie-Hellman key exchange. It is used to establish a secret key between A and B. Assuming prime number $p = 23$, base $g = 5$ and secret integers as $x = 6$ and $y = 15$, find out the values of messages A, B and secret key (S1 or S2).

3. a) Write all requirements for achieving authentication.
   b) Describe the format of X. 509.
   c) Define birthday attack using suitable example.
   d) Discuss and compare the compression function of SHA and MD5 algorithm.

   OR

   Define the generation and verification of the digital signature using Digital Signature Standard algorithm.

4. a) Classify the different categories of viruses.
   b) Define the worm propagation model.
   c) Differentiate between Proxy Trojans and FTP Trojans.
   d) What is CAPTCHA protection? Describe the various type of phishing using suitable example.

   OR

   How many attacker can perform DDoS attack? Write short notes on session hijacking and SQL injection.

5. a) Explain the concept of trusted system.
   b) Discuss the classes of hackers.
   c) Write short notes on Email spider and system hacking cycle.
   d) Explain working of packet filters firewall. Describe the architecture of IP Layer Security.

   OR

   Define the stages and steps of forensic investigation in tracking Cyber Crime.

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