USN ☐☐☐☐☐☐☐☐☐☐ 06CS/IS835

Eighth Semester B.E. Degree Examination, June 2012
Information and Network Security

Time: 3 hrs. Max. Marks:100

Note: *Answer FIVE full questions, selecting*
atleast TWO questions from each part.

PART – A

1 a. Explain issue-specific security policy. **(10 Marks)**
   b. Draw a schematic diagram showing the major steps in contingency planning. Explain in detail, business impact analysis. **(10 Marks)**

2 a. Explain the firewall rules. **(10 Marks)**
   b. What is a VPN? Explain the different techniques to implement on VPN. **(10 Marks)**

3 a. Differentiate between network-based IDS and host-based IDS emphasizing on their advantages and disadvantages. **(08 Marks)**
   b. With the help of a schematic diagram, explain the centralized control strategy implementation of IDS. **(06 Marks)**
   c. Enumerate the advantages and disadvantages of using honey pots. **(06 Marks)**

4 a. What are the fundamental differences between symmetric and asymmetric encryption. **(06 Marks)**
   b. Explain the different categories of attacks on the cryptosystem. **(08 Marks)**
   c. Define the following terms with relation to cryptography.
      i) Algorithm   ii) Key   iii) Plaintext
      iv) Steganography v) Work factor   vi) Key space. **(06 Marks)**

PART – B

5 a. Discuss active security attacks. **(04 Marks)**
   b. With the help of a neat diagram, explain the general format of a X.509 public key certificate. **(06 Marks)**
   c. Explain the Kerberos version 4 message exchanges. **(10 Marks)**

6 a. Explain the PGP message generation and reception processes. **(10 Marks)**
   b. Explain the different MIME content types. **(10 Marks)**

7 a. Mention the applications of IPsec. **(04 Marks)**
   b. Explain the security association selectors that determine an security policy database entry. **(06 Marks)**
   c. Draw a neat diagram of IPsec ESP format and explain. **(05 Marks)**
   d. Mention the important features of Oakley algorithm. **(05 Marks)**

8 a. Explain the parameters that define session state and connection state in SSL. **(10 Marks)**
   b. Describe the SET participants. **(05 Marks)**
   c. Explain the construction of dual signature in SET with a diagram. Also show its verification by the merchant and the bank. **(05 Marks)**

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