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10CS/IS835

Eighth Semester B.E. Degree Examination, June/July 2018
Information and Network Security

Time: 3 hrs.

Max. Marks:100

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

PART – A

1 a. With a block diagram, explain how policies, standards, practices, procedures and guidelines are related. **(05 Marks)**
   b. Explain enterprise information security policy and issue specific security policy. **(10 Marks)**
   c. Mention the criteria to be met for the policy to be effective and enforceable. **(05 Marks)**

2 a. Describe the categories of firewalls based on processing modes. **(10 Marks)**
   b. What is VPN? Explain the different modes of VPN. **(10 Marks)**

3 a. Explain the various IDPS detection methods. **(10 Marks)**
   b. What are honey pots, honey nets and padded cell systems? **(03 Marks)**
   c. List the advantages and disadvantages of using honey pots or padded cell. **(07 Marks)**

4 a. Describe symmetric encryption and asymmetric encryption with suitable examples. **(06 Marks)**
   b. Define the following :
      i) Authentication
      ii) Integrity
      iii) Privacy
      iv) Non-repudiation. **(04 Marks)**
   c. Explain different types of attacks on cryptosystems. **(10 Marks)**

PART – B

5 a. With a neat diagram explain network security model. Mention the four basic tasks in designing security service. **(06 Marks)**
   b. List the differences between Kerberos version 4 and version 5. **(10 Marks)**
   c. Draw X·509 certificate format. **(04 Marks)**

6 a. With neat diagrams explain PGP authentication and confidentiality functions. **(10 Marks)**
   b. Describe S/MIME functionality. **(05 Marks)**
   c. How are the certificates processed in S/MIME? **(05 Marks)**

7 a. Discuss the Anti-Replay service provided by authentication header of IPSec. **(05 Marks)**
   b. Draw and explain ESP format. What is the significance of padding bytes? **(10 Marks)**
   c. List the features that characterize the Oakley algorithm. **(05 Marks)**

8 a. Explain SSL handshake protocol with a neat diagram. **(10 Marks)**
   b. List the key features of SET. **(04 Marks)**
   c. What is dual signature in SET? Explain with diagram. **(06 Marks)**

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