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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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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8=50, will be treated as malpractice.