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10CS/IS835

Eighth Semester B.E. Degree Examination, July/August 2021
Information and Network Security

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Briefly explain the components of Enterprise Information Security Policy (EISP). (10 Marks)
 b. With a neat diagram, explain the components of contingency planning. (10 Marks)
- 2 a. Explain how the firewalls have been categorized based on processing modes. (10 Marks)
 b. Briefly explain how remote connections can be protected. (06 Marks)
 c. Explain any 2 architectural implementations of firewalls. (04 Marks)
- 3 a. Explain the different detection methods used by IDPS. (10 Marks)
 b. Briefly explain how a Host Based IDPS (HIDPS) can be used to monitor a particular computer or server. (04 Marks)
 c. Briefly explain the different control strategies used by IDPS. (06 Marks)
- 4 a. Briefly explain the different categories of attacks on crypto systems. (08 Marks)
 b. Explain with an example encryption and decryption can be done using Vernam cipher. (08 Marks)
 c. Briefly explain how wireless network can be secured using Wi-Fi Protected Access (WPA). (04 Marks)
- 5 a. Define: i) Security Attack ii) Security Mechanism iii) Security service. Explain security attacks in details. (10 Marks)
 b. Explain message exchanges in Kerberos version 4. (06 Marks)
 c. Explain the X.509 certificate format. (04 Marks)
- 6 a. List the different services offered by PGP and also mention the algorithm used for each service. (06 Marks)
 b. Explain PGP Message generation and PGP message reception using and private key rings. (08 Marks)
 c. Explain the different functions provided by S/MIME. (06 Marks)
- 7 a. With a diagram, explain the IPsec Document overview. (08 Marks)
 b. Explain IPsec Authentication header. (06 Marks)
 c. Discuss the need for Oakley algorithm and its important features. (06 Marks)
- 8 a. Discuss the components of SET with diagram. (10 Marks)
 b. Explain how the alert protocol is used to convey SSL related alerts to the peer entity and also list the alerts that are fatal. (10 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.