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Eighth Semester B.E. Degree Examination, June/July 2019
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 the elements and components of enterprise information security policy. (10 Marks)
b. What is contingency planning? Explain in detail incident response planning. (10 Marks)
- 2 a. What is firewall? Explain the packet filtering firewall. (08 Marks)
b. With a neat diagram, explain the screened subnet firewall with DMZ. (06 Marks)
c. What is VPN? Explain the tunnel mode of implementing a VPN. (06 Marks)
- 3 a. What is IDS? Explain network based intrusion detection system. Also mention its advantages and disadvantages. (08 Marks)
b. Explain the signature based IDP's method used to monitor and evaluate the network traffic. (06 Marks)
c. Explain Honey pots. (06 Marks)
- 4 a. What is cryptography? Explain the vernal cipher method used to encrypt the plaintext. Apply the same method to encrypt the plaintext COMPUTER SECURITY using one time pad INFORMATION WORLD. (08 Marks)
b. Differentiate between symmetric and asymmetric encryption. (04 Marks)
c. Explain the different categories of attacks on the cryptosystem. (08 Marks)

PART – B

- 5 a. Define a attack? Explain the different types of active and passive attacks. (07 Marks)
b. Explain the Kerberos version 4 message exchanges. (08 Marks)
c. With a neat diagram, explain the various fields of X.509 certificate format. (05 Marks)
- 6 a. With a neat diagram, explain the authentication and confidentiality services provided by PGP. (10 Marks)
b. Explain the different MIME content types. (10 Marks)
- 7 a. What is security association? Explain the different parameters associated with SA. (08 Marks)
b. Explain the anti-replay mechanism. (05 Marks)
c. Explain the format of an ESP packet in IP security. (07 Marks)
- 8 a. With a neat diagram, explain the operation of SSL record protocol. (08 Marks)
b. Explain the different participants in SET system. (06 Marks)
c. Explain the construction of dual signature in SET protocol. (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.