

M.E. COMPUTER SCIENCE AND ENGINEERING FIRST YEAR SECOND SEMESTER - 2025

Network Security

Time: 3 hours

Full Marks: 100

Answer ANY FIVE (5) questions

1.

a. What is CIA Triad? Briefly describe. What is the property of *confidentiality*? What are the main concerns of financial applications? Give an example where *confidentiality policy* would be required.

b. What is *threat*? What are the different categories of threat? Give any two examples of *threat*. Why is *threat* generally regarded as passive? [12+8=20]

2.

a. What is *phishing*? What are the different types of phishing?

b. What is *nuisance* attack? Why is it so called?

c. What is meant by *impersonation attack*?

d. Why is a mobile device vulnerable? [4X5=20]

3.

a. What is *worm*? What is *Spyware*?

b. How can *Botnet* infect a system?

c. What is a *digital certificate*? What information does a *digital certificate* contain? How and when can it be used? [6+4+10=20]

4.

a. What is a *cryptographic hash function*? Mention any one property of *cryptographic hash function*.

b. What is IEEE802.11iRSN?

c. What is *Kerberos*? How does *Kerberos* work? [4+4+12=20]

5.

a. How does Needham-Schroeder key exchange protocol work? What is its problem?

b. What does Diffie-Hellman protocol do and how? [10+10=20]

6.

a. In what different ways may a system experience Distributed Denial of Service (DDoS) attack? Explain with a diagram showing a system experiencing DDoS.

b. What is IP spoofing? Briefly describe it with the help of a diagram. [12+8=20]

Moderated by:

Signature of Paper-Setter:

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