Exam. Code: 1045
Sub. Code: 35455

2125

M.E. Computer Science and Engineering (Cyber Security)

First Semester

Elective - II

CSN-8105: Introduction to Information Security

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: ***Attempt five questions in all, including Question No. 7 (Unit-III) which is compulsory and selecting two questions each from Unit I - II.***

x-x-x

UNIT-I

1) Consider that the information is stored in your personal computer. How will you identify threat, attack, vulnerability and exploit? What are the measures required to protect confidentiality of information? What is the importance of infrastructure protection (assuring the security of utility services) and how that is related to the enhancement of information security? (10)

2) Define and differentiate the following by taking examples:
   a) Symmetric and Asymmetric cryptography
   b) Substitution cipher and Transposition cipher (5, 5)

3)
   a) What is difference among viruses, malware, trojans, worms, spyware, and ransomware in the context of cyber security? Give examples.
   b) What is a phishing attack? What are its various types? How does it work? (5, 5)

UNIT-II

4)
   a) Explain the format of X.509 certificate. Provide any one real-time case study for the use of X.509 certificate.
   b) Describe the TSL architecture in information security and explain how it helps on the top of transport protocol like TCP. (5, 5)

5) What is meant by Intrusion Detection and Prevention System (IDPS)? How does a network-based IDPS differ from a host-based IDPS? Explain. (10)

6) Outline the purpose of an organization's security policy and what steps should be considered in its development. (10)

UNIT-III (Compulsory Question)

7)
   a) Which of thumb print and iris scanning tools is more economical and least intrusive? Explain.
   b) What are the two basic functions used in encryption algorithms?
   c) What is packet sniffing? How are packet sniffers harmful to network security?
   d) How has the perception of hacker changed over recent years?
   e) Explain how email message can be sent securely with a neat example. (5x2=10)

x-x-x