Code: CS7T3

IV B.Tech - I Semester –Regular / Supplementary Examinations March - 2021

INFORMATION SECURITY
(COMPUTER SCIENCE AND ENGINEERING)

Duration: 3 hours   Max. Marks: 70
PART – A

Answer *all* the questions.   All questions carry equal marks
                                                        11 x 2 = 22 M

1.
   a) Define information security and list out various security attacks.
   b) Differentiate Passive attacks and Active attacks.
   c) Briefly explain various key distribution approaches.
   d) Define symmetric encryption and asymmetric encryption.
   e) What are the different conventional encryption algorithms?
   f) Define Digital certificate and certificate authority.
   g) What is the use of S/MIME?
   h) What are the components of the SET system?
   i) Differentiate Firewall and Intrusion Detection System.
   j) What is need of trusted system?
   k) What are the different types of viruses?

Answer any *THREE* questions. All questions carry equal marks.

$$3 \times 16 = 48 \text{ M}$$

2. a) What is security mechanism? Briefly describe the relation between security services and mechanisms.   8 M

   b) Briefly describe a model for network security with the help of a neat diagram.   8 M

3. Explain the following
   a) Location of encryption devices.   8 M
   b) Key distribution Approaches.   8 M

4. a) Briefly describe about digital certificates and public key distribution of secret keys.   8 M

   b) What are the design goals of Kerberos?   8 M

5. a) Describe in detail about combining security associations.   8 M

   b) Briefly describe the involved steps in the SSL Record protocol transmission.   8 M

6. Explain the following
   a) Firewall Design Principles   8 M
   b) Intrusion detection approaches   8 M