USN ☐☐☐☐☐☐☐☐☐☐ 10CS/IS835

Eighth Semester B.E. Degree Examination, June/July 2017

Information and Network Security

Time: 3 hrs. Max. Marks:100

Note: *Answer FIVE full questions, selecting*
at least TWO questions from each part.

PART – A

1 a. Explain the term policy, standard and practice with respect to information security with a neat diagram. **(08 Marks)**
  b. Describe in details the major steps in contingency planning with a diagram. **(12 Marks)**

2 a. What is a firewall? Discuss the categorization methods of firewall. **(12 Marks)**
  b. What is Virtual Private Networks (VPN)? Explain two modes of a VPN. **(08 Marks)**

3 a. Bring out the different types of intrusion detection system (IDSs), with their advantages and disadvantages. **(10 Marks)**
  b. Define:
     i) False negative
     ii) False positive
     iii) Site policy
     iv) Alarm filtering. **(04 Marks)**
  c. Explain Honey pots, Honey nets and padded cell systems. **(06 Marks)**

4 a. Encipher the text message "VISVESVARAYA TECH VERSITY" with one-time pad text "JNANA SANGAMA KARNATAKA ST" using Vernam cipher technique. **(10 Marks)**
  b. Explain the different attack on cryprosystem. **(10 Marks)**

PART – B

5 a. Discuss the different security attack. **(10 Marks)**
  b. Explain in detail the X.509 certificates format with a diagram. **(10 Marks)**

6 a. Discuss the services of pretty good privacy (PGP). **(10 Marks)**
  b. Explain the Multipurpose Internet Mail Extension (MIME) content type. **(05 Marks)**
  c. Briefly explain the S/MIME functionality. **(05 Marks)**

7 a. With a diagram, explain the authentication header of IPSec packet. **(10 Marks)**
  b. Discuss the transport and tunnel modes of operation in Encapsulating Security Payload (ESP). **(10 Marks)**

8 a. Explain the four phase of handshake protocol action in Secure Socket Layer (SSL). **(10 Marks)**
  b. Discuss the key features and components of Secure Electronic Transaction (SET). **(10 Marks)**

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