USN ☐☐☐☐☐☐☐☐☐☐ **10CS/IS835**

Eighth Semester B.E. Degree Examination, June/July 2016
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. Briefly explain the components of issue specific security policy.   (08 Marks)
   b. Discuss various stages in a Incident response planning strategy.   (08 Marks)
   c. Write and define different levels of controls in a security Architecture.   (04 Marks)

2 a. Explain different categories of Firewalls according to their processing mode. (10 Marks)
   b. Define any six design rules of Firewall.   (06 Marks)
   c. Discuss content filter technology in a security.   (04 Marks)

3 a. Explain Host based intrusion detection system. Write its advantages and disadvantages.
                                                                                  (08 Marks)
   b. Discuss port scanning and Vulnerability scanning tools.   (08 Marks)
   c. Define the following terms with respect to intrusion detection system:
      i) Alert   ii) False positive   iii) False negative   iv) Confidence value.   (04 Marks)

4 a. Describe any four attacks on a cryptosystem.   (08 Marks)
   b. Explain substitution cipher technique. Discuss its weakness.   (08 Marks)
   c. Define the following terms with respect to cryptography:
      i) Encryption   ii) Cipher   iii) Keyspace   iv) Strganography.   (04 Marks)

PART – B

5 a. Write and explain the general format of a X.509 public key certificate.   (08 Marks)
   b. List the difference between Kerberos version 4 and version 5.   (06 Marks)
   c. Explain any Three Active security attacks.   (06 Marks)

6 a. Explain the PGP message generation and message reception technique.   (10 Marks)
   b. Briefly explain the header fields of MIME protocol.   (05 Marks)
   c. What is S/MIME? What are the functions of S/SMIME?   (05 Marks)

7 a. Describe the SA parameters and SA selectors of a IPSec.   (10 Marks)
   b. Draw and explain the header format of ESP protocol.   (06 Marks)
   c. Mention the applications of IPSec.   (04 Marks)

8 a. Explain different phases in a SSL Handshake protocol.   (10 Marks)
   b. Define the key features of SET protocol.   (04 Marks)
   c. Discuss the need and construction of a Dual-signature in a SET protocol.   (06 Marks)

* * * * *