K 1217

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2004.

Seventh Semester

Computer Science and Engineering

CS 431 — NETWORK PROTOCOLS, MANAGEMENT AND SECURITY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by network control?

2. Illustrate the different types of performance indicators.

3. State some characteristics of SNMP.

4. Give the structure for Management Information.

5. Give all generic types of attacks.

6. Encrypted message must contain some redundancy. Why?

7. What is digital signature?

8. What are secure electronic transactions?

9. What is an active network?

10. Define intelligent networks.

PART B — (5 × 16 = 80 marks)

11. (i) Write notes on network monitoring architecture. (8)

(ii) What are the basic concepts of SNMP? Explain. (8)

12. (a) (i) Discuss in detail about RMON. (8)

(ii) What are the main enhancements of SNMP2 and SNMP3? Explain. (8)

Or

(b) (i) State and explain various design goals of RMON. (6)

(ii) Describe various operations supported by SNMP. (6)

(iii) What are the limitations of SNMP? (4)

13. (a) (i) Explain RSA algorithm with an example. (8)

(ii) Write short notes on PEM and PGP. (8)

Or

(b) (i) How does a client C communicate with a server S using Kerberos protocol? Explain. (6)

(ii) What are different types of digital certificate? Explain. (10)

14. (a) (i) Explain the architecture of secure socket layer. (4)

(ii) State and explain different types of firewall mechanisms available. (12)

Or

(b) (i) Explain how security is provided by network layer. (10)

(ii) How does NFS provide security to NFS clients and servers? (6)

15. (a) (i) List and explain the requirements for wireless LANs. (10)

(ii) State some motivations for collision free (reservation) protocols. (6)

Or

(b) (i) Write short notes on Fast Ethernet and Gigabit Ethernet. (8)

(ii) Which communication protocol is designed to support integrated voice and data networks? Discuss in detail. (8)
