

A 1158

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Sixth Semester

Computer Science and Engineering

CS 339 — COMPUTER NETWORKS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Wireless network and mobile network are not identical. Explain.
2. What is Nyquist's theorem?
3. What is the importance of Hamming Distance?
4. What is Manchester Encoding?
5. What is meant by Count-to-infinity problem?
6. What are the IP address ranges for various classes of Classful addressing?
7. What are the two multiplexing strategies used in transport layer?
8. What is the importance of variable sized sliding window in TCP?
9. How does the user get e-mail from the ISP's message transfer agent?
10. What is the importance of cookies?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain various layers in TCP/IP reference model. (8)
(ii) Compare the layers in OSI model with layers in TCP/IP model. (8)
- Or
- (b) (i) Explain any four modulation techniques. (8)
(ii) Explain any three multiplexing techniques used at physical layer. (8)

12. (a) (i) Explain Hamming code technique to correct single bit error with an example. (8)
(ii) Explain numbering of frames in GoBack n, and Selective repeat protocols. (8)

Or

- (b) (i) Explain MAC Ethernet protocol. (8)
(ii) Explain MAC sublayer protocol and frame structure of 802.16. (8)
13. (a) (i) What are the limitations of Distance Vector routing? How are they addressed in Link state routing? (8)
(ii) Explain routing of mobile hosts. (8)

Or

- (b) (i) Explain Choke packets method of congestion control. (10)
(ii) Explain Classless Inter Domain Routing (CIDR). (6)
14. (a) (i) Explain various problems and corresponding solutions in establishing a connection at transport layer. (10)
(ii) Explain the connection release process applied at transport layer. (6)

Or

- (b) Explain Window management in TCP. (16)
15. (a) (i) Write about various message formats used for e-mail. (10)
(ii) Write about XML. (6)

Or

- (b) (i) Write about streaming audio. (10)
(ii) Explain the importance of firewalls. (6)