N 1325

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

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. Differentiate distributed system and computer network.

2. What is e–commerce and what are its various forms?

3. What is a frame and give an example?

4. Show the bit sequence transmitted for the four character frame A B ESC FLAG when starting and ending flag bytes are available with bit stug fing.

5. What is the purpose of choke packet?

6. How is PING implemented?

7. State any 2 socket primitives for TCP and state their function.

8. Give the structure of UDP header.

9. What is mailing list?

10. What is filter for e–mail users?

PART B — (5 × 16 = 80 marks)

11. (i) Differentiate unicasting, multicasting and broadcasting. (6)

(ii) Explain the functions of the layers in the OSI reference model. (10)

12. (a) (i) Explain the data link layer in the internet. (10)

(ii) If the frame is 110 10 11011 and generator is 10011 what would be the transmitted frame? (6)

Or

(b) (i) Explain the blue–tooth architecture, applications and the protocol stack. (10)

(ii) Explain piggy backing implementation of sliding window protocol. (6)

13. (a) Explain flooding, distance vector routing and hierarchical routing. (16)

Or

(b) Explain the network layer in the internet and IP addressing. (16)

14. (a) Explain the TCP header and working of the TCP protocol. (5 + 11)

Or

(b) Explain RPC and Real–Time transport protocol. (16)

15. (a) Explain DNS with reference to its components and working. (16)

Or

(b) Explain the encryption model for a symmetric key cipher and substitution and transposition ciphers. (16)

———————