K 1225

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

Seventh Semester

Information Technology

IF 451 — HIGH PERFORMANCE NETWORKS

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What is meant by statistical multiplexing?

2. Give the difference between CBR and VBR.

3. Write down the parameters of Traffic.

4. What are the main features of ATM?

5. Why is out–of band signaling preferable to in–band signaling?

6. Define the term capacity.

7. Name the factors which influence the performance of networks.

8. Define ISDN.

9. What is referred to as selective frequency fading?

10. Define Cell loss ratio.

PART B — ($5 \times 16 = 80$ marks)

11. (i) Briefly discuss about the $Q \circ S$ parameters in Wireless networks. (12)

(ii) Write short notes on buffer overflow probability. (4)

12. (a) Describe the Evolution of Communication networks. (16)

Or

(b) (i) What is the need for network protocols? Elaborate the Principal network elements and service characteristics. (12)

(ii) Compare the Key innovations between Telephone, computer and wireless networks. (4)

13. (a) (i) Explain in detail the B–ISDN architecture. (8)

(ii) Discuss how congestion is controlled in ATM networks. (8)

Or

(b) (i) Explain the Private Network–Network Routing in detail. (8)

(ii) Briefly discuss about Flow control in ATM. (8)

14. (a) With the help of neat sketch explain the Wireless LAN infrastructure. (16)

Or

(b) Write short notes on :

(i) MAC layer protocol for wireless networks. (8)

(ii) Blue Tooth Technology. (8)

15. (a) (i) Compare the architecture of Single hop LANs and Multi hop LANs. (10)

(ii) With neat diagrams explain Optical cross connectors. (6)

Or

(b) Explain the principle of Wave Division Multiplexing and DWDM. (8 + 8)
