B.E/B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2006.

Seventh Semester

Information Technology

IF 451 — HIGH PERFORMANCE NETWORKS

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the difference between bit rate and baud?

2. What is the necessity of modulation?

3. What are the characteristics of connection oriented data transfer?

4. What is the importance of B - Channel in ISDN?

5. What is HAN?

6. Write Bluetooth protocol stack.

7. What is the importance of EDFA in optical networks?

8. Draw the schematic diagram of wavelength add drop multiplexer.

9. What is the difference between Class A and Class B services offered by ATM?

10. What is the necessity of SAR sub - layer in ATM?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Compare and contrast packet switching with circuit switching. (8)

       (ii) What is meant by Hamming distance? Explain its importance. (8)

Or

    (b) (i) Explain the terms propagation delay, Transmission delay, and Queuing delay. (9)

       (ii) Explain wireless network. (7)

12. (a) (i) Explain about AAL Type 5 protocol. (10)

(ii) Explain the importance of sliding window. (6)

Or

(b) (i) Write about Generic Flow Control in ATM. (10)

(ii) How to achieve synchronization in cell-based physical layer. (6)

13. (a) (i) Explain about architecture and reference model of HIPERLAN. (8)

(ii) Explain layered protocol architecture of IEEE 802 .11. (8)

Or

(b) Explain PHY layer Convergence protocol (PCLP) of IEEE 802.11. (16)

14. (a) (i) What is meant by multi hop broadcast select networks of a WDM optical networking? Explain. (10)

(ii) What are the advantages and disadvantages of broadcast select networks and wavelength routed networks? (6)

Or

(b) (i) What are various non-linear effects on optical signal? (8)

(ii) Explain about wavelength routed cross connect. (8)

15. (a) (i) What are the various traffic descriptors defined by ATM forum? (8)

(ii) Explain about various QoS descriptors of ATM. (8)

Or

(b) (i) Describe Virtual scheduling algorithm used in ATM. (8)

(ii) Explain the usage of RM cell and its format. (8)

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