

G 6027

M.E. DEGREE EXAMINATION, MAY/JUNE 2007.

Second Semester

Computer and Communication

AN 1630 — HIGH PERFORMANCE COMMUNICATION NETWORKS

(Common to M.E. – Applied Electronics, M.E. – Communication Systems and
M.E. – Optical Communication)

(Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define the term round trip propagation delay.
2. What is a media interface controller?
3. State the primary difference between N-ISDN and B-ISDN.
4. How are ATM cells multiplexed?
5. Name the ATM layers.
6. State the difference between in band and out of band signaling.
7. What is a scatternet?
8. What is the function of host controller interface?
9. What is pruning?
10. State the principle of reverse path forwarding.

PART B — (5 × 16 = 80 marks)

11. (a) (i) With circuit schematic, explain the architecture and working principle of IEEE 802.11 WLANs. (8)
- (ii) Discuss how data transmission is done in DQDB. (8)

Or

- (b) (i) Explain the different features of SMDS. Also state three SIP levels and their functions. (8)
- (ii) List the layers of OSI model and briefly explain the function of each layer. (8)
- 12. (a) (i) Draw a comparison between the three B-ISDN access method. (8)
- (ii) Briefly explain the principle and connection features of ISDN. (8)

Or

- (b) (i) Describe the call control; protocol architecture at the ISDN user network interface. (8)
- (ii) Explain the features of link layer protocol (LAPD). (8)
- 13. (a) (i) Explain the architecture of ATM network with necessary sketches. (8)
- (ii) Explain the routing of a call using a VP switch in an ATM network. (8)

Or

- (b) (i) Discuss briefly the four classes in ATM frame. (8)
- (ii) Explain the physical layer aspects of frame relay. (8)
- 14. (a) Explain the separation of routing and forwarding functions in MPLS. (16)

Or

- (b) (i) Discuss the features of forwarding architecture overlay model. (8)
- (ii) Write short notes on Resource Reservation Protocol. (8)
- 15. (a) Discuss the various elements of link manager protocols of blue tooth. (16)

Or

- (b) Write short notes on the following :
 - (i) Service Discovery Protocol. (8)
 - (ii) Telephony Control Protocol. (8)

(C)

Time : T

1. St

2. D

3. L

4. D

5. D

6. W

7. D

8. V

9. L

10. V