Q 8023

M.E. DEGREE EXAMINATION, MAY/JUNE 2006.

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)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the key elements of a protocol?

2. Briefly compare TCP/IP and OSI Models.

3. Write the key technology ingredients that determine the nature of a LAN (or) MAN.

4. What are the important requirements of wireless LANs?

5. Briefly discuss about ATM protocol architecture.

6. Justify frame relay is more efficient than X.25 service.

7. Write the objectives of congestion control mechanism.

8. Mention the principles of ISDN.

9. Discuss the concept of addressing scheme, briefly.

10. What are the IP service primitives and parameters at source and destination ends?

PART B — (5 × 16 = 80 marks)

11. (i) Explain how ISDN is used in public networks.

    (ii) Describe about the signalling system used in ISDN.

12. (a) (i) Suggest a new reference model with 5 layers only as against 7 layers in ISO–OSI reference model. (8)

(ii) Explain Internetworking and discuss the various issues that arise when two or more networks are connected together.

Or

(b) Explain in detail the various IEEE standards for LAN in detail.

13. (a) (i) Explain the various performance parameters of ATM. (8)

(ii) Describe about the ATM protocol stack. (8)

Or

(b) (i) Discuss in detail frame relay protocol architecture.

(ii) Explain frame relay congestion control.

14. (a) Explain in need for overlaying IP internetworking protocol on top of ATM. Discuss any three IP-Over-ATM approaches.

Or

(b) RSVP signalling is very different from ATM signalling. Discuss the differences in detail and list the advantages and disadvantages of each protocol.

15. (a) Describe the Bluetooth protocol architecture in detail. Also discuss the various modules associated with it.

Or

(b) Write notes on :

(i) Wireless Access protocol. (8)

(ii) Service discovery protocol. (8)

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