P 7345

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

Elective

Power Electronics and Drives/Power Systems Engineering

PX 036 — COMPUTER NETWORK ENGINEERING

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the relationship between services and protocols. Give an example.
2. Compare the different types of topologies.
3. Differentiate between circuit switched networks and packet switched networks.
4. Draw the various IP address formats.
5. What is meant by congestion control?
6. What is the role of UDP in Internet?
7. List the five basic functions supported by Email system.
8. Name the series of steps to be performed for processing each request in WWW.
9. What are fire walls?
10. Define Authentication and Authorization.

PART B — (5 × 16 = 80 marks)

11. (i) Draw the OSI model and explain the functions performed by each layer. (8)

    (ii) What is the MAC protocol used for ring topology? Explain its features. (8)

12. (a) (i) Explain the functions of a Bridge and the protocol architecture for Bridges. (8)

    (ii) Discuss the TCP/IP protocol suite. (8)

Or

(b) (i) With a schematic explain the two general approaches for internetworking mode of operation. (8)

(ii) Explain the features of ICMP. (8)

13. (a) (i) Discuss any two routing methods. (8)

(ii) Draw the schematic of TCP connection management finite state machine and explain the events. (8)

Or

(b) (i) Explain the features of UDP. (8)

(ii) What is QOS? Explain. (8)

14. (a) (i) Give the format of FTP URL and explain the various fields. (8)

(ii) With diagrams explain the B-ISDN protocol model and its reference configurations. (8)

Or

(b) (i) How are the functions in ISDN grouped. Discuss in detail. (8)

(ii) Compare POP3 and IMAP. (8)

15. (a) (i) Give an example of network management configuration and explain the elements of SNMP. (8)

(ii) Explain about congestion prevention policies and its control in subnets. (8)

Or

(b) (i) Difference between symmetric-key and public key algorithm. Explain any one in detail. (8)

(ii) Discuss the different methods of fault management in networks. (8)
