E 6332

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Elective

Power Electronics and Drives

PX 036 — COMPUTER NETWORK ENGINEERING

(Common to M.E. – Power Systems Engineering)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by Layered Architecture in Networking?

2. What is DOD? What are its functions?

3. Name the two different switching techniques and their applications.

4. What are the advantages of address resolution protocol in inter networking?

5. List the functions of Network Layer.

6. Differentiate between connectionless and connection-oriented protocol.

7. What is remote procedure call in UDP?

8. Expand HTML. What are the other languages available?

9. What are the metrics that are used to monitor the network for congestion?

10. Define public key and private key.

PART B — (5 × 16 = 80 marks)

11. (i) Explain in detail about any two media access protocols.   (10)

    (ii) Discuss about the channel allocation problem in Medium access control layer.   (6)

12. (a) (i) Explain the internet protocol architecture.   (8)

    (ii) What are the various design issues involved in the operation of IP controlled internet? Discuss briefly.   (8)

Or

(b) (i) With a neat sketch explain the operation of a LAN Bridge. (10)

(ii) Differentiate between repeaters, switches, routers and gateways. (6)

13. (a) Draw the structure of a typical campus network and explain the various features. (16)

Or

(b) (i) Compare virtual – circuit and datagrams. (8)

(ii) Discuss any one routing algorithm for adhoc networks. (8)

14. (a) (i) Draw the B-ISDN protocol model for ATM and explain the architecture. (10)

(ii) List the principles of ISDN. (6)

Or

(b) Discuss the salient features of file transfer protocol. (16)

15. (a) (i) Explain the DES scheme of data encryption. (8)

(ii) What is digital signature? Explain. (8)

Or

(b) (i) Explain the architecture of network management. (8)

(ii) Discuss about any one type of congestion control algorithm. (8)

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