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Question Paper Code : 11250

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Seventh Semester

Electrical and Electronics Engineering

080280066 — COMPUTER NETWORKS

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the three switching methods?
2. List the different network components.
3. Write any two applications of M/M/1 queue.
4. Write the steady state little's equation.
5. What are the advantages of FDDI over a basic token ring?
6. What are the uses of CSMA/CD?
7. How are asynchronous protocol primarily used?
8. In HDLC, what is bit stuffing?
9. What is the primary use of ISDN protocol?
10. Why is padding necessary for ATM cells?

PART B — (5 × 16 = 80 marks)

11. (a) Explain the functions of different layers of OSI reference model.

Or

(b) (i) Discuss the concept of switching as it relates to the problems involved in the connection of devices. (8)

(ii) Compare the mechanism of a space division switch to the mechanism of a time division switch. (8)

12. (a) (i) Write the basic characteristics of queuing models. (8)

(ii) Briefly explain the different classification of queuing models. (8)

Or

(b) Explain the concept of M/M/1 queuing model with an example application. (16)

13. (a) (i) Why do you think that an Ethernet frame should have a minimum data size? (6)

(ii) Explain the principles of CSMA/CD. (10)

Or

(b) (i) What are the advantages of FDDI over a basic token ring? (8)

(ii) How does a token ring LAN operate? (8)

14. (a) (i) For each of the HDLC configurations. Discuss commands and responses. (8)

(ii) Name and discuss briefly the bits in the HDLC control field. (8)

Or

(b) (i) How are synchronous protocols classified? What is the basis of the classification? (8)

(ii) What are the X.25 layers? How does each relate to the OSI model? (8)

15. (a) (i) Write the limitations of ISDN protocol. (6)

(ii) Explain the principles of B-ISDN. (10)

Or

(b) (i) How is an ATM virtual connection identified? Describe the format of an ATM cell. (12)

(ii) How are ATM cells multiplexed? (4)
