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Question Paper Code : 51225

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 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 five components of data communication?
2. State the purpose of layering in networks.
3. Define Byte stuffing.
4. Write the purpose of auto negotiation in Fast ethernet?
5. What is the purpose of NIC?
6. How does a single bit error differ from a burst error?
7. Draw the format of frame in character oriented protocol.
8. What is meant by IP spoofing? How can a router be used to prevent IP spoofing?
9. State the purpose of maintaining a routing table.
10. How are ATM virtual connections identified?

PART B — (5 × 16 = 80 marks)

11. (a) Discuss in detail about various layers in OSI reference model. (16)
Or
(b) (i) Explain the three phases in circuit switched network. (8)
(ii) Write short notes on ARPANET. (8)

12. (a) Explain M/M/1 queuing model and describe how it is used in packet and circuit switching. (16)

Or

- (b) (i) Discuss the CSMA/CA mechanism used in 802.11 wireless LAN. How this is used to solve hidden station problem? (8)
- (ii) Discuss about different topology in network communication. (8)
13. (a) (i) List and discuss the various states in TCP connection management. (8)
- (ii) Explain in detail about UDP. (8)

Or

- (b) Discuss in detail about distance vector routing algorithm. Compare it with link state routing algorithm. (16)
14. (a) Discuss in detail about the architecture of Frame Relay. (16)

Or

- (b) (i) Given the data as 100100 and divisor $x^3 + x^2 + 1$ explain the CRC error detection method. (12)
- (ii) Explain how the looping problem in redundant bridges is solved. (4)
15. (a) (i) Explain the architecture of B-ISDN with neat diagram. (12)
- (ii) State the limitations of ISDN over B-ISDN. (4)

Or

- (b) (i) Discuss in detail the various issues in using ATM technology in LANs. (8)
- (ii) Explain the different types of VSAT networks. (8)
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