BCA – 31

III Semester B.C.A. Examination, Feb./March 2010

DATA COMMUNICATION

Time: 3 Hours Max. Marks: 80

Instructions *: 1) Answer* ***all*** *questions in Part* ***A****,* ***6*** *out of* ***8*** *questions in Part* ***B*** *and* ***3*** *out of* ***5*** *questions in Part* ***C****.*

2) Part ***A:*** *Questions from* ***1*** *to* ***8*** *carry* ***1*** *mark and* ***9*** *to* ***14*** *carry* ***2*** *marks.*

3) Part ***B : Each*** *question carries* ***5*** *marks.*

4) Part ***C : Each*** *question carries* ***10*** *marks.*

PART – A **(8×1=8)**

1. Expand ATM.
2. Define communication network.
3. What is a modem ?
4. Expand HDLC.
5. Define a bridge.
6. What is flow control ?
7. Define protocol.
8. Expand ISDN.

(6×2=12)

9. Define bit rate and baud rate.
10. Differentiate between continuous signal and discrete signal.
11. What is multiplexing? List the different types of multiplexing.
12. What is FDDI ? Compare it with token ring.

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13. Mention the layers of TCP/IP protocol architecture.

14. Differentiate between LAN and WAN.

PART – B **(6×5=30)**

15. What is a repeater ? Discuss analog and digital repeater.

16. Compare packet switching and circuit switching.

17. Explain cross bar switch. Discuss how the cross points required is reduced in multistage switch.

18. Explain the reasons for the use of multiple LANs interconnected.

19. Discuss Aloha and Slotted Aloha.

20. Explain different modulation techniques.

21. Discuss the characteristics and the services provided by LLC.

22. Given frame: 1101011011, Generator: 10011, calculate the transmitted frame using CRC.

PART – C **(3×10=30)**

23. With a suitable diagram, explain the OSI reference model in detail.

24. List the different guided transmission media. Discuss optical fiber in detail.

25. Discuss the three versions of ARQ protocol.

26. List the various communication tasks. Explain any four of them in detail.

27. What is line encoding? Mention the various line encoding techniques and explain them with a suitable example.

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