



NS – 611

V Semester B.C.A. Degree Examination, Nov./Dec. 2016
(CBCS) (16-17 and Onwards)
COMPUTER SCIENCE
BCA-501 : Data Communication and Networks

Time : 3 Hours

Max. Marks : 100

Instruction : Answer *all* the Sections.

SECTION – A

Answer **any ten** questions. **Each** carries **2** marks. **(10×2=20)**

1. Write any two examples of data communication modes.
2. Expand NIC and TCP.
3. What are the two types of LAN standards ?
4. What is a switch ?
5. Write any two differences between analog and digital signals.
6. Define multiplexing.
7. Expand HDLC and PPP.
8. What is framing ?
9. What is the use of repeaters ?
10. Expand FDDI and CSMA.
11. What is ethernet ?
12. What is meant by choke pocket ?

SECTION – B

Answer **any five** questions. **Each** carries **5** marks. **(5×5=25)**

13. Explain the types of transmission modes.
14. Compare mesh topology with star topology.
15. Explain the concept of checksum.
16. Explain the types of errors.

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17. Write short notes on piggy backing.
18. Explain the channelization method of CDMA.
19. Differentiate datagrams with virtual circuits.
20. Explain the flooding algorithm.

SECTION - C

Answer **any three** questions. **Each** question carries **15** marks.

(3×15=45)

21. a) Explain the types of networks. 7
- b) Explain the function of OSI model layers. 8
22. Explain the following :
 - a) Pulse Code Modulation 5
 - b) SONET multiplexing 5
 - c) Coaxial cable. 5
23. Explain the following :
 - a) CRC method 7
 - b) Stop-and-Wait-ARQ algorithm. 8
24. a) Write short notes on ALOHA protocols. 7
- b) Explain CSMA protocols. 8
25. Explain the following :
 - a) Dijkstra's algorithm 10
 - b) Token bucket algorithm. 5

SECTION - D

Answer **any one** question :

(1×10=10)

26. Compare packet switching with circuit switching.
27. Explain the following :
 - a) Modems 4
 - b) Congestion control. 6