



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. **(10x2=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. **(5x5=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**