65521

V Semester B.C.A. Degree Examination, April/May 2023
(CBCS) (Fresh+Repeaters)
COMPUTER SCIENCE – V
BCA501T : Data Communication and Networks

Time : 3 Hours Max. Marks : 100

***Instruction** : Answer **all** the Sections.*

SECTION – A

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

1) List out any two goals of a computer network.
2) What is half-duplex ?
3) Define line configuration.
4) Define Piggy backing.
5) Differences between connection oriented and connectionless network service.
6) What is Multiplexing ?
7) What is a router ?
8) What is ALOHA ?
9) What is HDLC ?
10) What is a bridge ? Mention the different types of bridges.
11) What is FDDI ?
12) What is signal to noise ratio ?

SECTION – B

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

13) Explain Circuit Switching.
14) Explain TCP/IP protocol.
15) Explain the Twisted Pair cable with neat diagram.

P.T.O.

16) Compare and contrast bit-stuffing and byte-stuffing.

17) Illustrate CSMA/CD method.

18) Explain different Polling System.

19) Explain Distance Vector Routing algorithm.

20) Explain IEEE 802.11 frame structure.

SECTION – C

III. Answer **any three** questions. **Each** question carries **fifteen** marks. **(3×15=45)**

21) a) Explain Packet and Message Switching in detail. **8**

b) Explain star topology with a neat diagram. **7**

22) a) What is a Modem ? Explain its types. **8**

b) Explain CRC method of error detection with an example. **7**

23) a) Explain Stop and Wait protocol with a neat diagram. **8**

b) Explain PPP Frame Format. **7**

24) a) Explain Channelization in detail. **8**

b) Explain Pure Aloha and Slotted Aloha. **7**

25) a) Explain Congestion Control Algorithm. **8**

b) Explain Dijkstra's algorithm with an example. **7**

SECTION – D

IV. Answer **any one** question. **Each** question carries **ten** marks. **(1×10=10)**

26) Explain OSI reference model. **10**

27) What is SONET ? Explain SONET multiplexing. **10**
