



QP – 418

³⁵
V Semester B.C.A. Examination, March/April 2022
(Y2K14 – CBCS) (F + R)
COMPUTER SCIENCE
BCA 501 : Data Communication and Networks

Time : 3 Hours

Max. Marks : 100

Instruction : Answer *all* Sections.

SECTION – A

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

- 1) What is Topology ?
- 2) What is Datagram ?
- 3) Define the term encryption and decryption.
- 4) What is a switch ?
- 5) Define line coding and unipolar encoding.
- 6) Write the applications of co-axial cable.
- 7) What is pipelining ?
- 8) What is CRC ?
- 9) What is a gateway ?
- 10) What is polling ?
- 11) Define thin and thick ethernet.
- 12) What is congestion ?



SECTION – B

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

- 13) Explain FTP in detail.
- 14) Explain the different communication modes.
- 15) Explain SONET multiplexing in detail.
- 16) Explain CRC method for error detection with an example.
- 17) Explain sliding window flow control protocol.
- 18) Write the comparison between FDMA and TDMA.

P.T.O.



- 19) Explain FDDI Frame structure in detail.
20) Explain Dijkstra's Algorithm by taking an example.

SECTION – C

- III. Answer **any three** questions. **Each** question carries **15** marks. **(3×15=45)**
- 21) a) Explain OSI Model in detail. **8**
b) Explain HTTP in detail with basic operations and key attributes. **7**
- 22) a) Explain the different scheduling approaches to medium access model. **10**
b) Explain Slotted Aloha. **5**
- 23) a) Explain IEEE standard 802.5 token ring. **9**
b) What is Bridge ? Explain the various types of Bridges. **6**
- 24) a) Explain in detail :
i) Twisted pair cable
ii) Fiber optic cable. **8**
b) Explain space division switching. **7**
- 25) a) Explain structure of packet switch. **8**
b) Explain Leaky Bucket Algorithm. **7**

SECTION – D

- IV. Answer **any one** question. **Each** question carries **10** marks. **(1×10=10)**
- 26) Explain TCP/IP model in detail.
27) Explain digital modulation in detail.
-