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V Semester B.C.A. Degree Examination, March/April - 2023

COMPUTER APPLICATIONS

Data Communication and Networks

(CBCS Scheme)

Paper : BCA 501 T

Time : 3 Hours

Maximum Marks : 100

Instructions to Candidates:

Answer **all** sections.

SECTION - A

I. Answer any **Ten** questions. Each question carries **2** marks.

(10×2=20)

1. Define data communication.
2. Explain LAN.
3. Define PING utility.
4. What is encoding?
5. Define Guided media. Give examples.
6. Write note on Token ring.
7. Define piggybacking.
8. What is ALOHA?
9. What are the services provided by Data link layer?
10. Define error. Mention the types of errors.
11. What is pipelining?
12. Define FDMA.

SECTION - B

II. Answer any **Five** questions. Each question carries **5** marks.

(5×5=25)

13. Explain BUS and STAR topology.
14. Define Amplitude, frequency, phase.
15. Write the characteristics of co-axial cable with diagram.
16. Write note on crossbar switch.
17. Explain CSMA/CD.
18. Write the frame structure of 802.3 LAN standard.
19. Describe FDDI.
20. Explain Bell man ford algorithm.

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SECTION - C

- III.** Answer any **Three** questions. Each question carries **15** marks. **(3×15=45)**
- 21. a. Explain OSI/ISO model with neat diagram. **(8)**
b. Distinguish difference between three types of switching techniques. **(7)**
 - 22. a. Explain Analog to digital encoding. **(8)**
b. Write note on fiber optical cable. **(7)**
 - 23. a. Define multiplexing? Explain FDM, TDM and WDM. **(10)**
b. Explain two dimensional parity check. **(5)**
 - 24. a. Explain STOP and WAIT ARQ protocol. **(8)**
b. Explain the phases of point - to - point protocol (PPP). **(7)**
 - 25. a. Write note on PURE ALOHA and Slotted ALOHA. **(8)**
b. Define bridge. Explain different types of bridges. **(7)**

SECTION - D

- IV.** Answer any **One**. Each question carries **10** marks. **(1×10=10)**
- 26. Explain TCP/IP protocol suit with neat diagram. **(10)**
 - 27. a. Explain GO-BACK-N-ARQ protocol. **(5)**
b. Explain Link state routing. **(5)**
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