



**III Semester B.C.A. Degree Examination, February/March 2024**  
**(NEP Scheme) (Freshers and Repeaters)**  
**COMPUTER APPLICATIONS**  
**Computer Communication and Networks**

Time : 2½ Hours

Max. Marks : 60

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

**SECTION – A**

I. Answer **any six** questions. **Each** question carries **2** marks. **(6x2=12)**

- 1) Mention any two applications of computer networks.
- 2) What is network topology ?
- 3) What is a twisted pair cable ?
- 4) Define attenuation and distortion.
- 5) What is framing ? What is the need for framing ?
- 6) Define switching and mention its types.
- 7) Compute odd parity and even parity for the data 10001001.
- 8) What is routing ?
- 9) Define DNS.

**SECTION – B**

II. Answer **any four** questions. **Each** question carries **6** marks. **(4x6=24)**

- 10) Explain multiplexing and demultiplexing.
- 11) What is Optical Fiber ? Explain with neat diagram.

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- 12) Explain sliding window protocol.
- 13) Generate CRC code for data word 100111 using the divisor 101.
- 14) Explain Go-back-N ARQ protocol.
- 15) Explain Leakey bucket algorithm.

## SECTION – C

III. Answer **any three** questions. **Each** question carries **8** marks. (3×8=24)

- 16) Compare OSI and TCP/IP network models. 8
- 17) Differentiate LAN, WAN and MAN. 8
- 18) What is switching ? Explain its types with neat diagram. 8
- 19) Explain distance vector routing with an example. 8
- 20) a) Explain working of SMTP. 4  
b) Explain elements of transport service. 4