

Roll No. ....

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Total No. of Questions : 07]

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**BCA (Sem. - 4<sup>th</sup>)**  
**COMPUTER NETWORKS**  
**SUBJECT CODE : BC-401**

**Paper ID : [B0215]**

[Note: Please fill subject code and paper ID on OMR]

Time : 03 Hours

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Maximum Marks : 60

**Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.

**Section - A**

**(10 × 2 = 20)**

**Q1)**

- a) Define Data Communication and Computer network.
- b) What are different modes of data communications?
- c) What is multiplexing? Explain its types.
- d) What are various IEEE standards?
- e) What is internetworking? Explain its use.
- f) Explain the difference between synchronous and asynchronous communication.
- g) What are network protocols?
- h) What is HDLC? How it different from SDLC?
- i) What are various design issues in network layer?
- j) What are leased lines? Explain with example.

**Section - B**

**(4 × 10 = 40)**

- Q2)** What are various guided and unguided network media? Explain their advantages and disadvantages.
- Q3)** What is switching? Explain various switching techniques.
- Q4)** What is OSI model? Explain how it is different from TCP/IP model.
- Q5)** What is data link layer? Explain various services provided by data link layer to network layer.
- Q6)** What are various routing algorithms? Explain.
- Q7)** What are network topologies? Explain various network topologies with their advantages and disadvantages.

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