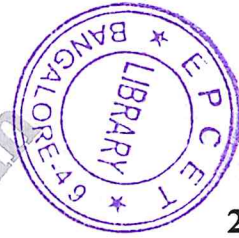


# CBCS SCHEME



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21CS52

**Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025**

## Computer Networks

Time: 3 hrs.

Max. Marks: 100

**Note:** Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Explain : i) Personal area networks ii) Wide area networks. (10 Marks)  
b. Explain services and functions of each layer of OSI model along with neat sketch of OSI reference model. (10 Marks)

**OR**

- 2 a. Explain twisted pair cable with neat diagram. (10 Marks)  
b. Explain : i) Microwave transmission ii) Radio transmission. (10 Marks)

### Module-2

- 3 a. Explain sliding window protocol using Go-Back-N along with example. (10 Marks)  
b. Explain : i) Error control ii) Flow control. (10 Marks)

**OR**

- 4 a. Explain any 2 framing methods along with example. (10 Marks)  
b. Explain CRC along with an example. (10 Marks)

### Module-3

- 5 a. Explain distance vector routing algorithm with example. (10 Marks)  
b. Explain : i) Store and forward packet switching  
ii) Implementation of connectionless service. (10 Marks)

**OR**

- 6 a. i) Differentiate between datagram network and virtual circuit network  
ii) Explain packet switching. (10 Marks)  
b. Explain shortest path algorithm, with an example. (10 Marks)

### Module-4

- 7 a. Explain : i) Transport service primitives  
ii) Nesting of segments, packets and frames. (10 Marks)  
b. Explain remote procedure call and steps involved in it. (10 Marks)

**OR**

- 8 a. Explain connection for three way handshake protocol (10 Marks)  
b. i) Explain state diagram for simple connection management scheme  
ii) Explain UDP header. (10 Marks)

### Module-5

- 9 a. Explain MIME. (10 Marks)  
b. i) Explain name servers ii) Explain E-mail. (10 Marks)

**OR**

- 10 a. Explain architecture of e-mail system with neat diagram. (10 Marks)  
b. Explain architecture of web with neat diagram. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

