CBCS SCHEME

USN | | | | | | | | | | |

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.*

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.

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)**

* * * * *