



Roll No

**PRESIDENCY UNIVERSITY
BENGALURU**

School Of Computer Science and Engineering & Information Science

End-Term Examinations, Aug 2024

Even Semester: 2023 - 24

Course Code: CSE2011

Course Name: Data Communication and Computer Networks

Department: CSE (DCET)

Date: 14.08.2024

Time: 9.30AM -12.30PM

Max Marks: 100

Weightage: 50%

Instructions:

- (i) Read the all questions carefully and answer accordingly.
(ii) Do not write any matter on the question paper other than roll number.

Q.No	Questions	Marks	CO	RBT
1	a. Describe computer networks and need of networking.	4	CO1	L1
	b. List and explain different transmission medium.	6	CO1	L2
	c. Explain ISO - OSI Reference model.	10	CO1	L3

OR

2	a. Explain different types of computer networks	4	CO1	L1
	b. Illustrate TCP/IP model	6	CO1	L2
	c. Explain different selective repeat and Go-back N in detail	10	CO1	L3

3	a. Explain the functionalities of network layer and also mention the roles of control and data-plane	4	C O2	L 1
	b. For the address 192.168.1.0 create 4 subnets with equal no. of hosts	6	C O2	L 2
	c. Explain the Concept of IP-Addressing (IPv4) and also mention about different classes of IP address with relevant examples	1 0	C O2	L 3

OR

4	a. Differentiate between connection less and connection-oriented service	4	CO2	L1
	b. Explain TCP segment structure	6	CO2	L2
	c. Divide the network 192.168.5.0 in to 8 subnets with equal no. of hosts	10	CO2	L3

5	a. Illustrate on DNS and its functionality.	4	CO3	L1
	b. Explain the concept of Checksum with an example	6	CO3	L2
	c. Elaborate on different topologies with an example	10	CO3	L3

OR

6	a. Explain the protocols BGP and ICMP	4	CO 3	L 1
	b. Explain the IPV4 data gram format with a neat diagram	6	CO 3	L 2
	c. Explain the concept of NAT and differentiate between Distance vector and Link State Algorithms	10	CO 3	L 3

7	a. List and explain the services of Data Link layer	4	CO4	L1
	b. Explain the Single Parity check with example	6	CO4	L2
	c. In detail explain checksum and 2 dimensional parity check with an example	10	CO4	L3

OR

8	a. What is ALOHA and explain different types of ALOHA	4	CO4	L1
	b. List and explain channel partitioning protocols.	6	CO4	L2
	c. Elaborate on DHCP and the process of IP addressing	10	CO4	L3

9	a. Explain CSMA and its types.	4	C O5	L 1
	b. With neat diagram illustrate the concept of VLAN and also portray the difference in comparison with the physical LAN	6	C O5	L 2
	c. Explain CRC with the following data 100100 with the divisor 1101	1 0	C O5	L 3

OR

10	a. List and explain 4 fundamental characteristics of communication	4	CO 5	L 1
	b. Elaborate on different data flow modes in communications with an example	6	CO 5	L 2
	c. Explain the different components of communication with a neat diagram	1 0	CO 5	L 3