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PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – May / June 2026

Date: 25- 05- 2026

Time: 09:30am – 12:30pm

School: SOIS	Program: BCA	
Course Code : CSA2502	Course Name : COMPUTER NETWORKS	
Semester: II	Max Marks: 100	Weightage: 50%

CO - Levels	C01	C02	C03	C04	C05
Marks	26	22	26	26	NA

Instructions:

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

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1	Define a computer network.	2 Marks	L1	C01
2	Mention any two protocols used in the Application Layer of the TCP/IP model.	2 Marks	L1	C01
3	Define Socket Address.	2 Marks	L1	C01
4	Define Redundancy bit.	2 Marks	L1	C02
5	Identify the class of these classful IP addresses: a. 130.46.54.17 b. 220.39.29.15	2 Marks	L1	C03
6	What is RIP?	2 Marks	L1	C03
7	What is the function of a router?	2 Marks	L2	C03
8	What is a firewall in network security?	2 Marks	L1	C04
9	State any two characteristics of wireless networks.	2 Marks	L1	C04
10	What is an Intrusion Detection System (IDS)?	2 Marks	L1	C04

Part B

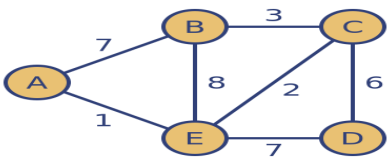
Answer the Questions

Total 80 Marks.

11.	a.	Describe the OSI reference model in detail. Include the functions of each layer.	10 Marks	L3	CO1
	b.	Explain the different types of computer networks with examples and features	10 Marks	L2	CO1

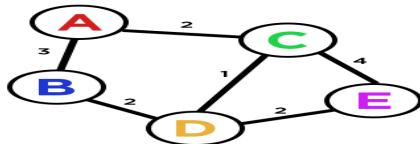
Or

12.	a.	What is DNS, and how does it work? Describe its main parts and why it's important on the internet	10 Marks	L2	CO1
	b.	Explain Connectionless and Connection-Oriented Approaches of transport layer	10 Marks	L2	CO1

13.	a.	Consider a network with 6 routers A to D connected with links having weights as shown in the following diagram.  All the routers use the distance vector based routing algorithm to update their routing tables. Find Initial routing table Find the updated routing table for A to D Find the Minimum Distance between Node A to Node D	12 Marks	L2	CO2
	b.	Describe the various transition techniques from IPv4 to IPv6	8 Marks	L2	CO2

Or

14.	a.	Using the Link State routing algorithm, find the optimal route for the given network with Root node A.	10 Marks	L2	CO2
	b.	Discuss the concepts of Classful and Classless IP addressing. How do they differ in terms of address allocation and routing?	10 Marks	L2	CO2



15.	a.	Describe the STOP-N-WAIT mechanism with diagram.	12 Marks	L2	CO3
	b.	Describe the Go-Back-N ARQ mechanism. What happens when a frame is lost in transmission?	8 Marks	L2	CO3

Or

16.	a.	Describe any two Error detection methods with example in Data link layer.	10 Marks	L2	CO3
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	b.	Given the dataword 101001111 and the divisor 10111, demonstrate the generation of the CRC codeword at the sender site using binary division.	10 Marks	L2	CO3
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17.	a.	Explain the architecture, features, and applications of 4G cellular networks.	10 Marks	L2	CO4
	b.	Describe firewall and also its types, functions, and importance in network security.	10 Marks	L2	CO4

Or

18.	a.	Discuss the challenges and limitations of wireless communication compared with wired networks.	10 Marks	L3	CO4
	b.	Explain the IEEE 802.11 frame structure and the services provided by Wi-Fi networks.	10 Marks	L2	CO4