Course Code: **24BC4T10**

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

II-BCA II-Semester Model Paper (BR24), June - 2026

COMPUTER NETWORKS (BCA)

Time: 3 hours | Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A and Part-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1.a)	What is a computer network?	2(M)	CO1	BL1
b)	Define bandwidth and throughput.	2(M)	CO1	BL1
c)	Define framing.	2(M)	CO2	BL1
d)	What is checksum?	2(M)	CO2	BL1
e)	What is packet switching	2(M)	CO3	BL1
f)	Define routing.	2(M)	CO3	BL1
g)	Define UDP	2(M)	CO4	BL1
h)	What is congestion control?	2(M)	CO4	BL1
i)	What is WWW?	2(M)	CO5	BL1
j)	Define DNS	2(M)	CO5	BL1

PART–B (5X10 = 50M)

	UNIT-I			
2a.	Explain **OSI 7-layer model** with diagram.	10M	CO1	BL2
	(OR)			
3 a) b)	Explain types of networks with examples Describe transmission impairments.	5M 5M	CO1	BL4 BL1

	UNIT-II			
4 a) b)	Explain error detection techniques. Explain CSMA/CD and CSMA/CA.	5M 5M	CO2	BL2 BL4
	(OR)			
5 a)	Explain **multiple access protocols (ALOHA, CSMA, etc.)**	10M	CO2	BL2

	UNIT-III			
6.a)	Describe **IPv4 addressing and subnetting**.	10M	CO3	BL1
	(OR)			
7a. b.	Compare IPv4 and IPv6. Explain packet switching.	5M 5M	CO3	BL4 BL4

	UNIT-IV			
8 a) b)	Explain error control mechanisms Explain flow control in TCP.	5M 5M	CO4	BL2
	(OR)			
9 a)	Explain **TCP and UDP**.	10M	CO4	BL4

	UNIT-V			
10.a)	Explain **WWW architecture and HTTP working**	10M	CO5	BL2
	(OR)			
11a) b)	What is QoS and its importance? Explain DNS working.	5M 5M	CO5	BL1 BL4

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