Code No.: AI603PC	R20	H.T.No.			8	R						

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Supply) - June- 2025
COMPUTER NETWORKS
(Common for CSC, CSM)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(20 Marks)**

1. a)	Differentiate the Guided and Unguided Transmission Medium.	[2M]
b)	Compare virtual circuit and datagram.	[2M]
c)	Define Gateway.	[2M]
d)	Outline the responsibilities of data link layer.	[2M]
e)	Define ICMP. Draw the general format of ICMP.	[2M]
f)	What is time-to-live or packet lifetime.	[2M]
g)	Define Congestion.	[2M]
h)	What is the function of transport layer?	[2M]
i)	What is the function of SMTP?	[2M]
j)	Write a short note on WWW.	[2M]

PART-B **(50 Marks)**

2.a)	Compare and contrast OSI and TCP/IP model.	[5M]
b)	With a neat sketch describe about transmission media and its types.	[5M]
	OR	
3.	Explain OSI/ISO reference model by specifying each layer functionalities.	[10M]
4.	Explain about sliding window protocols in detail.	[10M]
	OR	
5.	Explain Error detection and correction mechanisms with example.	[10M]
6.	Define Routing. Discuss about any two congestion control algorithms in detail.	[10M]
	OR	
7.a)	Explain internetworking in network layer.	[5M]
b)	Analyze Distance Vector Routing algorithm with an example.	[5M]
8.	Discuss about the elements of transport layer protocols.	[10M]
	OR	
9.	Examine TCP internet transport protocol by specifying TCP header format.	[10M]
10.	Explain in detail about the DNS. Why DNS is implemented as distributed system.	[10M]
	OR	
11.	What is e-mail? Explain its architecture.	[10M]

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