

**PRAGATI ENGINEERING COLLEGE: SURAMPALEM  
(AUTONOMOUS)**

**M.Tech II Semester Regular/Supplementary Examinations, July – 2024**

**COMPUTER NETWORKS  
(CSE)**

Time: 3 hours

Max. Marks: 60

**Answer any FIVE questions  
All questions carry EQUAL marks**

5X12=60

Q.NO.	Question	BTL	CO	Marks
1.	a. Why do we need layering in network software design? Explain the layering mechanism used in internet network software. Explain the services provided by each of these layers.	K2	CO1	6M
	b. With the help of neat diagrams explain the following: i. LAN, MAN, WAN ii. Star and Ring topology	K2	CO1	6M
2.	a. Distinguish between the guided transmission media and wireless transmission media.	K2	CO2	6M
	b. Explain the following concepts: i. TDM ii. FDM	K2	CO2	6M
3	a. A bit stream 1011011 is transmitted using standard CRC. The generator polynomial is $x^3+x^2+1$ . Analyze the actual bit stream transmitted from source to receiver also check error occurred at receiver end or not.	K4	CO3	6M
	b. Explain simplex stop & wait with neat sketches.	K2	CO3	6M
4	a. Write about CSMA with CA and CSMA with CD. Explain briefly.	K2	CO4	6M
	b. Summarize the uses of Ethernet and also explain any two types of Ethernet.	K2	CO4	6M
5.	a. Illustrate shortest path routing algorithm with an example.	K2	CO5	6M
	b. Illustrate congestion prevention policies in networks.	K2	CO5	6M
6.	a. Illustrate Selective repeat stop and wait protocol with neat diagram.	K2	CO3	6M
	b. Write the design issues of DLL and explain briefly.	K2	CO3	6M
7	a. Explain the following Carrier Sense Multiple Access protocols: i. 1 – persistent ii. Non-persistent CSMA ii. P-persistent CSMA	K2	CO4	6M
	b. Explain 802.11 architecture and protocol stack.	K2	CO4	6M
8	a. Explain distance vector routing algorithm by considering any arbitrary network graph.	K2	CO5	6M
	b. Identify the use of Load Shedding in networks.	K3	CO5	6M