

P.V.P Siddhartha Institute of Technology							
Department of Computer Science and Engineering							
Mid Term Examinations – I			Regulation: PVP20				
Program: B.Tech		Year: III	Semester: I	Descriptive -1		A.Y:2024-25	
Course Code: 20CS3503		Course Name: Computer Networks			Section: 1 , 2 & 3		
Duration: 1 hr 30 min		Maximum Marks: 15		Date:14/08/2024		Session: FN	
Answer all the Questions.							
Q.No	Question				Marks	CO	Level
1.a	What are the principles of protocol layering? Explain the services provided by the each of the layers in TCP/IP or OSI reference model.				2	CO1	L2
1.b	A bit stream 1101010100110 is transmitted using the standard CRC method. The generator polynomial is x^5+x+1 . What is the actual bit string transmitted? If every odd bit is flipped in the transmission Calculate CRC at the receiver side and find out if there is any error.				3	CO2	L3
2a.	An ISP is granted the block 80.70.56.0/21. The ISP needs to allocate addresses for two organizations each with 500 addresses, two organizations each with 250 addresses, and three organizations each with 50 addresses. i) Find the number and range of addresses in the ISP block. ii) Find the range of addresses for each organization and range of unalloted addresses. iii) Show the outline of the address distribution & the forwarding table.				4	CO3	L3
2b.	Differentiate the IPv6 header Format and IPv4 header format				3		
3.	Which fields of the IPv4 main header may change from router to router? Justify your answer.				3	CO3	L3