



Shirpur Education Society's  
**R. C. PATEL INSTITUTE OF TECHNOLOGY, SHIRPUR**

An Autonomous Institute

( Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere )



**आर. सी. पटेल इन्स्टिट्यूट ऑफ टेक्नॉलॉजी, शिरपूर**  
(स्वायत्त महाविद्यालय)

**Academic Year (2021-22)**

**Year: S.Y. Tech**

**Semester: IV**

**Program: B. Tech. (Computer Engg.)**

**Max. Marks: 75**

**Subject: Computer Networks (PCCO4050T)**

**Time: 10:30 am to 1:30 pm**

**Date: 08/07/2022**

**Duration: 3 Hours**

**END SEMESTER EXAMINATION EVEN SEM (IV)**

**Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover page of the Answer Book, which is provided for their use.**

- (1) This question paper contains 2 pages.
- (2) **All Questions are Compulsory.**
- (3) All questions carry equal marks.
- (4) **Answer to each new question is to be started on a fresh page.**
- (5) **Figures in the brackets on the right indicate full marks.**
- (6) **Assume suitable data wherever required, but justify it.**
- (7) Draw the neat labelled diagrams, wherever necessary.

Question No.		Max. Marks
Q1 (a)	Draw, Explain and discuss Bus topology with its pros and cons.	[05]
	<b>OR</b>	
	What are the functions of Presentation Layer? Explain its step by step procedure with example.	[05]
Q1 (b)	Compare LAN, WAN and MAN.	[05]
	Compare ISO-OSI and TCP/IP reference model.	[05]
Q2 (a)	Explain Framing Techniques.	[10]
	<b>OR</b>	
	For an error detecting CRC, Consider $G(x)=10101$ .	[10]
	1. Compute the transmitted bit sequence for the data bit sequence 1101101.	
	2. The string of bits 110011001100 is received. Is acceptable and if so what is the data bit sequence.	
Q2 (b)	Write a short note on Ethernet and its types.	[05]
Q3 (a)	Discuss different types of Error messages in ICMP Protocol.	[05]
Q3 (b)	Explain Link State Routing in detail.	[10]
	<b>OR</b>	
	ISP has given the IP address 201.70.64.0. Form six Subnets out of it. Write Address range and Subnet Mask for each of the subnet.	[10]
Q4 (a)	Write and explain duties of Physical layer.	[05]
Q4 (b)	Compare types of Wired Media.	[05]
Q4 (c)	Write Short note on Wireless Media.	[05]



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Q5 (a)	i. Draw TCP-State Transition Diagram.	[05]
	ii. Write a program to implement TCP Socket.	[05]
	<b>OR</b>	
	Write short note on:	
	i. SMTP	[05]
	ii. DNS	[05]
Q5 (b)	Draw and Explain TCP Congestion Control.	[05]

All the Best!