



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India

(Autonomous College Affiliated to University of Mumbai)

Re Examination

Class: SE

Branch: Computer/Information Technology

Semester: IV

Name of the Course: Computer Communication and Networks

Instruction:

- (1) All questions are compulsory
- (2) Draw neat diagrams
- (3) Assume suitable data if necessary

Q. No.	Questions	Max. Marks	CO
1 a)	How UDP detect errors in transmitted segment. Explain with an example.	8	CO2
b)	Compare Packet Switching and Circuit Switching. Or Compare Non-persistent HTTP and persistent HTTP.	6	CO1
2 a)	Describe the flow of UDP sender and Receiver actions.	7	CO2
b)	Describe different access technologies and characteristics of each.	8	CO1
3 a)	Consider a subnet with prefix 128.119.40.128/26. Give an example of one IP address (of form xxx.xxx.xxx.xxx) that can be assigned to this network. Suppose an ISP owns the block of addresses of the form 128.119.40.64/26. Suppose it wants to create four subnets from this block, with each block having the same number of IP addresses. What are the prefixes (of form a.b.c.d/x) for the four subnets?	8	CO4

b)	How DHCP assigns IP address dynamically to hosts? Explain the complete DHCP client-server scenario.	8	CO3
4 a)	What is the purpose random access MAC protocols? Explain Slotted ALOHA with its pros and cons.	8	CO3
b)	<p>A 7 Bit Hamming Code is received as 1011011. Assume Even Parity and state whether received code is correct or wrong, if wrong locate the bit in error.</p> <p style="text-align: center;">OR</p> <p>Using Shortest path Algorithm, perform the following:</p> <pre> graph TD z((z)) --- 8 y((y)) z --- 12 t((t)) y --- 6 x((x)) y --- 7 t x --- 3 v((v)) x --- 6 w((w)) v --- 3 u((u)) v --- 4 w t --- 2 u u --- 3 w </pre> <p>a. Compute the shortest path from t to all network nodes. b. Compute the shortest path from u to all network nodes. c. Compute the shortest path from v to all network nodes. d. Compute the shortest path from w to all network nodes. e. Compute the shortest path from y to all network nodes. f. Compute the shortest path from z to all network nodes.</p>	7	CO3