Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(An Autonomous Institute Affiliated to University of Mumbai)

End Semester Examination
Nov/ Dec. 2018

Max. Marks: 60

Class: T.E

Course Code: CE51

Name of the Course: Data Communication and Network

Duration: 180 Minutes

Semester: V

Branch: Computer Engg.

Instructions:
   (1) All Questions are Compulsory
   (2) Draw neat diagrams
   (3) Assume suitable data if necessary

Question No.		Max. Marks	CO
1 (a)	What is IPV4 protocol? Explain the Header format of IPV4	6	
Q 1 (b)	Explain need of layer design for communication and networking.	6	
	OR		
	Compare OSI reference model with TCP/IP.	6	
Q2 (a)	Discuss various propagation modes in fiber optics cable? Explain the limitation of fiber optics cable.	6	
Q2 (b)	a) If bandwidth of channel is 8 kbps. How long does it take to send a frame 200000 bits out of any device?	3	
	b) What is signal to noise ratio? How to calculate bit rate in noise less cannel.	3	
Q3 (a)	Explain PPP protocol along with its frame format.	6	
Q3 (b)	Explain how the value of 'n' is decided in n bit sliding window protocol. Explain advantage of selective repeat over go back n protocol.	6	
Q4 (a)	Discuss the protocol in details for following	6	
	a) Conversion of logical address to physical address.		
	b) Conversion of physical address to logical address.		
Q4 (b)	a) Explain in details with example concepts of subnetting & supernetting.	6	
	OR		
	b) Discuss the limitation of IPV4 and how it is overcome by IPV6 protocol.	6	

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Q5 (a)	a) What do you mean by classless address and why it is required?
	 b) Find range of address in the following blocks.
	    i. 200.17.21.128/27
	    ii. 17.34.16.0/23.
	    iii. 123.56.77.32/29.
		6	

Q5 (b)	Which protocol is suitable for inter domain routing ? Explain BGP with suitable diagram.	6	