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GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER–V (NEW) EXAMINATION – WINTER 2020

Subject Code:3153204 **Date:27/01/2021**

Subject Name:Adavanced Network Protocols

Time:10:30 AM TO 12:30 PM **Total Marks: 56**

Instructions:

1. **Attempt any FOUR questions out of EIGHT questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

			MARKS
Q.1	**(a)**	Why does the DNS query message uses UDP and FTP use TCP? Justify your answer.	**03**
	(b)	List out the advantages of using IPv6 compared to IPv4.	**04**
	(c)	What is Routing in the Internet? Explain working of Distance Vector Routing.	**07**
Q.2	**(a)**	Briefly explain File Transfer Protocol.	**03**
	(b)	Distinguish Constant bit rate and Variable bit rate service with an example of each.	**04**
	(c)	What is the purpose of ATM adaptation layer? Which are the various ATM adaptation layers? Briefly explain on ATM adaptation layers.	**07**
Q.3	**(a)**	Compare LAN and WAN.	**03**
	(b)	Briefly show how is the IPv4 address converted to IPv6 address with an example.	**04**
	(c)	Elaborate the working of CSMA/CD used in standard Ethernet.	**07**
Q.4	**(a)**	Convert the multicast address 238.212.24.9 to an Ethernet multicast physical address. Physical address begins with the range 01:00:5E:00:00:00.	**03**
	(b)	How does the sending mail process happen? Explain in the reference of SMTP.	**04**
	(c)	Explain working of RSVP Protocol.	**07**
Q.5	**(a)**	Distinguish Multicasting and Multiple unicasting with an example.	**03**
	(b)	In a CDMA/CD network with a data rate of 10 Mbps, the minimum frame size is found to be 512 bits for the correct operation of the collision detection process. What should be the minimum frame size if we increase the data rate to 100 Mbps? 1 Gbps?	**04**
	(c)	What is hidden station problem in Wireless LANs? Also discuss Basic service set and Extended service set Architectures in Wireless LANs.	**07**

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Q.6	**(a)**	Briefly Explain Gigabit Ethernet.	**03**
	(b)	How is the IP used over ATM? Discuss briefly.	**04**
	(c)	What is functionality of Real time transport protocol? Explain its working.	**07**
Q.7	**(a)**	What are the limitations of TCP when used for handling real time traffic in Internet?	**03**
	(b)	How does the TCP Tahoe work? Explain.	**04**
	(c)	What do you understand by Network Management? Explain working of SNMP.	**07**
Q.8	**(a)**	Define Data plane and Control plane in the reference of Software defined Networking	**03**
	(b)	Briefly explain TCP Congestion policy.	**04**
	(c)	What is the purpose of Border Gateway Protocol? How its operation differ from intradomain routing? Discuss.	**07**

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