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Reg. No. : | | | | | | | | | | |

Question Paper Code: 54806

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fourth Semester

Information Technology

15UIT406- COMPUTER NETWORK

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Frames from one LAN can be transmitted to another LAN via the device CO1- R

   (a) Router (b) Bridge (c) Repeater (d) Modem

2. TCP process may not write and read data at the same speed. So we need _____ for storage. CO2- R

   (a) Packets (b) Buffers (c) Segments (d) Stacks

3. A station in a network forwards incoming packets by placing them on its shortest output queue. What routing algorithm is being used? CO3 -R

   (a) hot potato routing (b) flooding

   (c) delta routing (d) none of these

4. Token bucket can easily be implemented with a counter, initialized by CO4 -R

   (a) 0 (b) 1 (c) -1 (d) -2

5. A packef.filter firewall filters at the CO5 -R

   (a) application or transport (b) data link layer

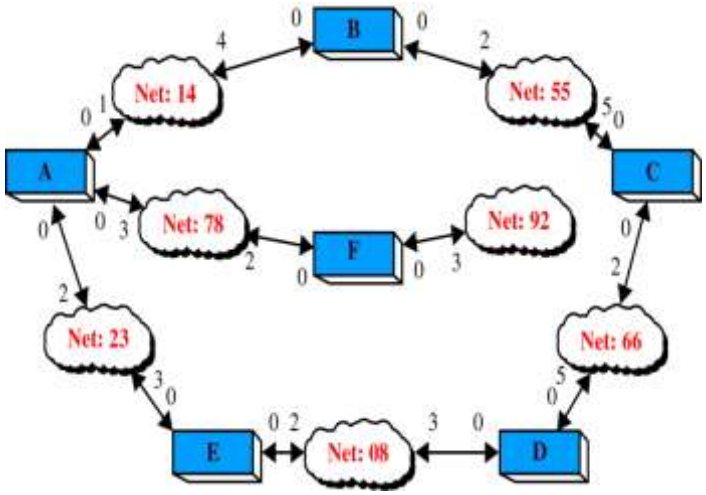
   (c) physical (d) network or transport layer

PART – B (5 x 3= 15 Marks)

6.	Describe the perspective requirements for building a network?	CO1 -R	
7.	How can hidden terminal problem be detected in 802.11 networks?	CO2 -R	
8.	Explain about classes in IP Address. Give example.	CO3 -R	
9.	Differentiate Flow control and Congestion control	CO4 -R	
10.	Why we are using firewalls? Give example	CO5- R	

PART – C (5 x 16= 80Marks)

11.	(a)	Explain Layers in OSI/ model in detail	CO1- App	(16)
		Or		
	(b)	Explain in detail about byte oriented protocols	CO1 -App	(16)
12.	(a)	Compare the functionalities of stop and wait protocol & Sliding window Protocol, What are the major differences in the data transmission.	CO2- App	(16)
		Or		
	(b)	Examine the working principle of CSMA/CD and how it affects the collision domain in ethernet.	CO2- Ana	(16)
13.	(a)		CO3 -Ana	(16)



(i) Using the above figure,find the shortest path tree and the routing table for router B.

(ii) Using the above figure,find the shortest path tree and the routing table for router F.

Or

	(b)	Explain in detail about of multicast routing with neat diagrams.	CO3 -Ana	(16)

14.	(a)	Compare and contrast the functionalities of TCP with UDP	CO4 -U	(16)
		Or		
	(b)	Define Congestion. Explain TCP congestion control mechanisms in detail.	CO4- Ana	(16)
15.	(a)	Discuss the features of HTTP and also discuss how HTTP works.	CO5- U	(16)
		Or		
	(b)	What is the need for DNS? Explain the role of DNS on a computer network	CO5 -U	(16)