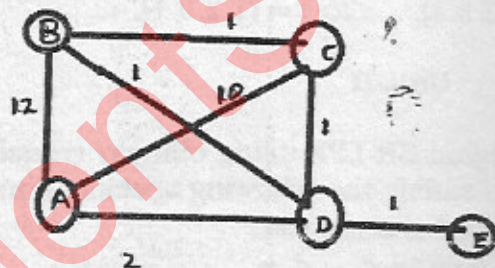


END TERM EXAMINATION**SIXTH SEMESTER [B.TECH] MAY- JUNE 2017****Paper Code: ETCS-306****Subject: Computer Networks****Time: 3 Hours****Maximum Marks: 75****Note: Attempt any five questions including Q.No1 which is compulsory.**

- Q1 (a) How flow control is different from congestion control? (3)
 (b) Difference between bit rate and baud rate? Explain with example. (3)
 (c) What is difference between Classful addressing and Classless IP addressing? (4)
 (d) What is major advantages of STP over UTP? (2.5)
 (e) Differentiate between Intranet, Internet and internet? (2.5)
 (f) Difference between baseband transmission and broad band transmission? (2.5)
 (g) What do you mean by Network Topology? Discuss the problems and benefits of any three topologies? (4.5)
 (h) What is routing? Differentiate between distance vector routing and link state routing? (3)
- Q2 (a) Calculate the throughput of the pure and slotted ALOHA channel. Which Channel gives better throughput and why? (6)
 (b) Define Stop and Wait ARQ protocol. Explain the reason for moving from Stop and wait ARQ protocol to the GO-Back-N ARQ protocol? (6.5)
- Q3 (a) Contrast and Compare ISO-OSI and TCP/IP networking models? (6.5)
 (b) What is the need for adaptive routing algorithms? Explain in details? (6)
- Q4 (a) Explain ATM reference model? Why does ATM use small fixed length cell? What is ATM signaling? (6.5)
 (b) Write short notes on ISDN? (4)
 (c) What is Tunneling? (2)
- Q5 (a) Given the network topology below use the Dijkstra's algorithm to compute the shortest path from A to all other nodes. Make sure to show the results of the computations at each step. (6.5)



- (b) What is collision? How does CSMA/CD detect and correct collision? (6)
- Q6 (a) Draw and explain packet format of Transmission control protocol? Explain various steps that are followed in releasing a TCP connection? (8)
 (b) Why transport layer protocols like TCP and UDP are called end-to-end protocols. What is the difference between them? (4.5)
- Q7 (a) Explain the Leaky bucket algorithm to control congestion. Explain how the drawbacks of this are overcome in token bucket algorithms? (6.5)
 (b) What is the maximum number of subnets in each case? (6)
 (i) Class A; mask 255.255.192.0
 (ii) Class B; mask 255.255.192.0
 (iii) Class C; mask 255.255.255.192
 (iv) Class C; mask 255.255.255.240
- Q8 (a) Difference between IPV4 and IPV6? Draw and explain the IPV4 protocol packet format? (8.5)
 (b) Evaluate the maximum bit rate for a channel having bandwidth 3100Hz and S/N ratio of 20 dB. (4)
