

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FOURTH SEMESTER B.TECH DEGREE EXAMINATION (Regular), JULY 2022

(2020 SCHEME)

Course Code : 20CST286

Course Name: Introduction to Computer Networks

Max. Marks : 100

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. Enumerate different components of communication system.
2. How to connect two separate Ethernet network segments? Justify your answer.
3. Define piggybacking. What is the use of it?
4. Find the minimum Hamming distance of the coding scheme in the following table

Dataword	Codeword
00	00000
01	01011
10	10101
11	11110

5. Define Flooding. What are the advantages and disadvantages of Flooding?
6. What you meant by Quality of Service (QoS)? Which are the different techniques for achieving good Quality of Service?
7. Differentiate ARP and RARP protocols.
8. Draw and explain Internet Control Message Protocol (ICMP) format.
9. Compare and contrast UDP and TCP protocol.
10. How congestion controlling is performed in TCP protocol?

PART B

(Answer one full question from each module, each question carries 14 marks)

MODULE I

11. a) With neat sketch explain TCP/IP model. (10)
- b) Compare TCP/IP model with ISO OSI model. (4)

OR

12. With a neat sketch explain ISO OSI reference model. (14)

MODULE II

13. With necessary algorithms and neat sketches explain the working of Selective- (14)

Repeat ARQ for noisy channel.

OR

14. Explain different Multiple access protocols. (14)

MODULE III

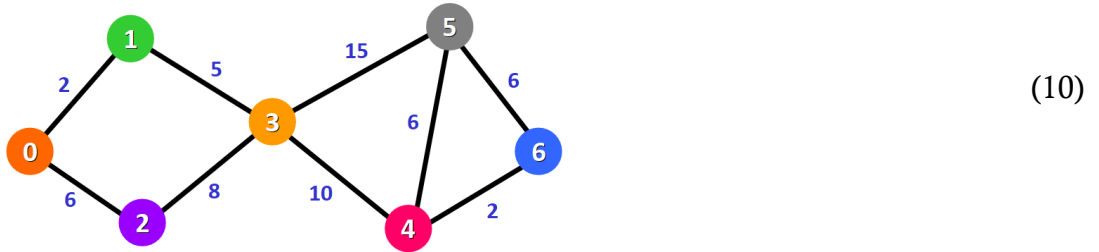
15. a) Find the best route for data packets using Distance vector routing algorithm for the following set of routers.



- b) Explain the count to infinity problem in Distance Vector Routing (4)

OR

16. a) Find the minimum cost from node 0 to node 6 using Dijkstra's Shortest Path Algorithm.



- b) Compare and contrast adaptive and non – adaptive routing algorithms. (4)

MODULE IV

17. a) Comment to which IP address the following belongs to 121.5.6.7 and 8BFA:99F0:D4C5:0B8C:0F6F:04DF:2804:283D, Compare and contrast both. (7)
 b) Compare and contrast BOOTSTRAP protocol and DHCP protocol (7)

OR

18. a) Explain different classes of IP address with suitable examples. (7)
 b) Differentiate between OSPF (Open Shortest Path First) and BGP (Border Gateway Protocol). (7)

MODULE V

19. a) With neat sketch explain User Datagram protocol (9)
 b) A user wants to send a message in audio format to a colleague who lives far away as email content. Comment on and describe the protocol that can be employed in the above-mentioned circumstance. (5)

OR

20. a) Explain the FTP and MIME protocols with necessary figures and examples (7)
- b) 'Mr. Rockey wants to transfer a video from his PC to his smartphone,' recommend the most appropriate protocol to establish the job and explain how it works. (7)
