



R18 Regulation

Subject code: 2P5FB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech V Semester Regular/Supplementary Examinations, December 2021
COMPUTER NETWORKS

(Information Technology)

Maximum Marks: 70

Date: 03.01.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

- 1 What are the advantages of Transmission media? (10x2M=20 Marks)
- 2 Difference between LAN, MAN and WAN
- 3 Difference between Fast Ethernet and Gigabit Ethernet
- 4 Discuss IEEE 802.3 frame format
- 5 What is Multi cast Routing? Explain
- 6 What are the functions of ICMP?
- 7 How does persistence timer is useful in TCP ?
- 8 What is the architecture of WWW?
- 9 What is the use of classes in IPv4
- 10 What are the concepts of extension header in IPv6?

Part-B

Answer All the following questions.

- 11 a) Compare and contrast the OSI and TCP/IP reference models. (5X10M=50Marks)
b) Explain Frequency division Multiplexing. [5M+5M]
- OR
- 12 a) What do you mean by computer network? Classify computer networks and Explain them in brief.
b) Discuss about the various transmission media available at the physical layer. [5M+5M]
- 13 a) What is the significance of data link layer? Explain the design issues of data link layer.
b) Illustrate Routing of Packets within Virtual Circuit Subnet. [5M+5M]
- OR
- 14 a) With neat sketch, explain different layers of ATM.
b) Difference between flow control and Error control. [5M+5M]
- 15 a) Explain Distance Vector routing algorithm with an example.
b) Describe Dijkstra shortest path algorithm. Also show working of Dijkstra algorithm with the help of an example. [5M+5M]

OR

- 16 a) Explain in detail about Unicast and multicast routings.
b) Explain File transfer protocol in Application layer. [5M+5M]
- 17 a) Write briefly about Congestion control in datagram subnets.
b) Write a brief note on TCP and UDP protocols. Also compare the TCP and UDP Protocols. [5M+5M]
- OR
- 18 a) Write the structure of TCP pseudo header and explain how it is used in checksum calculation
b) Explain about SNMP. [5M+5M]
- 19 a) What is the format of IPv4 header? Describe the significance of each field?
b) What is the difference between Bluetooth and Zigbee? [5M+5M]
- OR
- 20 a) What is network security? Explain Network Mechanisms and attacks?
b) What is the difference between IPSec, SSN and VPN ? [5M+5M]