



*R20 Regulation* *Subject code: 3P5FD*  
**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous, Accredited by NAAC with 'A' Grade)  
**B.Tech V Semester Supplementary Examinations, June/July 2023**

**COMPUTER NETWORKS**  
(INFORMATION TECHNOLOGY)

**Maximum Marks: 70**

**Date:28.06.2023 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 which carries 10M.  
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

(10x2M=20 Marks)

- 1 Generalize LAN , WAN and MAN.
- 2 Explain why protocols are needed?
- 3 Differentiate Byte stuffing and Bit stuffing
- 4 Summarize the PPP Packet format.
- 5 Write about forwarding and Routing
- 6 Discuss how the transition from IPV4 to IPV6 happens?
- 7 What are the techniques to improve the Quality of service?
- 8 Summarize the term Differentiated services.
- 9 How would you discover MIME types and subtypes?
- 10 Describe the protocol used for e-mail security.

**Part-B**

Answer All the following questions.

(5X10M=50Marks)

- 11 A. Draw the structure of switch and explain the circuit switching in detail (5)  
B. Explain about packet switching with neat diagram. (5)  
OR
- 12 Explain in detail about TCP/IP Protocol suite with suitable diagram. (10)
- 13 Classify in detail about High-level Data Link Control and the types of frames. (10)  
OR
- 14 Explain Random access methods  
A. ALOHA (5)  
B. CSMA/CD (5)
- 15 Discuss about Unicast Routing algorithms. (10)  
OR
- 16 Discuss Internet Control Message Protocol version 4. (10)
- 17 A. Illustrate in detail about UDP header format with neat sketch. (5)  
B. Describe in detail about TCP with neat sketch. (5)  
OR

- 18 How is congestion controlled? Explain in detail about congestion control mechanisms in transport layer. (10)
- 19 A. Explain Telnet in detail. (5)  
B. Illustrate the role of POP3 in electronic mail applications. Explain in detail. (5)
- OR
- 20 Explain in detail about the network layer security. (10)