

Computer Networks

P. Pages : 2

Time : Three Hours



KNT/KW/16/7409

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Assume suitable data whenever necessary.

1. a) Explain TCP/IP model in detail and compare it with OSI Reference model. **9**
- b) Differentiate between computer Networks and distributed system. **3**
- c) Draw the different WAN topologies. **2**

OR

2. a) Mention the different design issues of each layer of OSI model in detail. **10**
- b) What are different types of service primitives? Explain with example. **4**
3. a) What is the significance of hamming distance? How is it used for error correction? Explain with example. **6**
- b) What are the 3 kinds of frames in HDLC protocol? Explain each one in detail. **7**

OR

4. a) Explain in detail Go-Back-n protocol. **7**
- b) How does simplex stop and wait protocol works? Write the algorithms for it. **6**
5. a) How is ring maintenance done in token rings? **6**
- b) List the types of LCP packets in PPP protocol. **4**
- c) Write the concept behind ALOHA Protocol. **3**

OR

6. a) What are CSMA protocols? Explain each one in detail. **5**
- b) Explain difference between FDMA, TDMA, CDMA. **8**

7. a) Explain distance vector routing algorithm compare it with link state routing algorithm. 8
b) Explain shortest path algorithm. 6

OR

8. a) What is the optimality principle in routing? Explain with an example the hierarchical routing algorithm. 8
b) Explain the mobile routing basic algorithm. 6
9. a) How can congestion be defined? What are the factors that can cause it? 5
b) Explain Leaky bucket and token bucket algorithm. 8

OR

10. a) Write a short note on Internet protocol (IP) 6
b) Write a short note on ARP, RARP with suitable example. 7
11. a) Discuss in brief different quality of service (QOS) parameters used in transport layer. 7
b) Write the details of three-way handshake protocol for establishing connection in transport layer. 6

OR

12. Write short notes on **any three**.
- i) ISDN system architecture. 4
ii) ATM layers. 4
iii) Crash Recovery. 4
iv) Wireless LANs: IEEE 802.11 5
