

**Computer Communication Network**

P. Pages : 2

Time : Three Hours



**NKT/KS/17/7549/7561**

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. Due credit will be given to neatness and adequate dimensions.
  9. Assume suitable data whenever necessary.
  10. Illustrate your answers whenever necessary with the help of neat sketches.
  11. Use of non programmable calculator is permitted.

1. a) State various services provided by the Network for companies and people. **6**  
b) Draw the OSI reference model and explain the function of different layers. **7**

**OR**

2. a) Write short notes on X.25 Networks. **7**  
b) Compare ATM and frame Relay. **6**
3. a) What are different guided and unguided media ? Explain in detail. **7**  
b) Explain Datagram packet switching and virtual circuit packet switching with the help of diagram. **6**

**OR**

4. a) Write short notes on IEEE std 802.11 a, b, c, g. **7**  
b) Explain cable modem and DSL technologies. **6**
5. a) Write short notes on flow control. **7**  
b) Explain frame format of HDLC. **6**

**OR**

6. a) Explain the Network Hardware components HUBs, Bridges, Repeaters, Switch, Router and NIC. **7**  
b) Explain the different sliding window protocols. **6**  
i) Go-Back-N ii) Selective Repeat

7. a) Explain wireless TCP & UDP. 7  
b) Draw and explain IPv4 Header format and compare it with IPv6 format. 7

**OR**

8. a) Explain distance vector routing protocol in network layer. 7  
b) Explain : 7  
i) Link state routing  
ii) Path vector routing

9. Write short notes on :  
a) Ping protocol. 3  
b) BOOTP 4  
c) DNS 3  
d) File transfer protocol. 4

**OR**

10. Write short notes on :  
a) Streaming Audio / Video. 7  
b) P2P file sharing. 7
11. a) Give the difference between convention and public key encryption. 7  
b) Explain the secret key Algorithm. 6

**OR**

12. Write short notes on : 13  
a) Network Tester.  
b) Internet access through  
Dialup/DSL/Leased Line/Mobile handset.

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