



- 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. Illustrate your answers whenever necessary with the help of neat sketches.

1. A) What are the functions of switch, bridge and a repeater? At what layers of OSI model each of the above operate. 4
- B) Compare OSI model with TCP/IP model. 4
- C) Compare Wired LAN and wireless LAN. 5

**OR**

2. A) Give the classification of LAN and WAN in detail. 6
- B) Draw and Define various maturity levels of RFC. 7
3. A) In a block of addresses the IP-address of one of the host is 182.44.82.16/26, what is the first address and last address in this block. 6
- B) Explain various packet forwarding technique used by IP. 7

**OR**

4. A) Compare ARP and RARP. 6
- B) Explain transition from IPv4 to IPv6. 7
5. A) Explain following query messages used by ICMP: 7
- i) Echo. request and reply. ii) Timestamp request and reply.
- B) Draw and Explain fields in RIP message format. 7

**OR**

6. A) Compare OSPF and BGP routing protocols. 7
- B) Write short notes on: 7
- i) ICMP<sub>v 6</sub> ii) ICMP<sub>v 4</sub>

7. A) Explain in detail IGMP operation. 6  
B) Draw and explain agent advertisement message for mobile – IP. 7

**OR**

8. A) Write short notes on: 7  
i) MOSPF  
ii) DVMRP  
iii) CBT

B) Differentiate between multicasting, unicasting and Broadcasting. 6

9. A) Draw and Explain state transition diagram for TCP. 7

B) Compare TCP header and UDP header list the fields of TCP header that are missing from UDP header, Give the reason for their absence. 7

**OR**

10. A) Explain How flow control and error control is implemented by TCP. 8

B) Explain about TCP timers in detail. 6

11. A) Explain the transition diagram of DHCP. 6

B) List the management commands for FTP. 3

C) Explain trivial file transfer protocol. 4

**OR**

12. A) What do you mean by iterative resolution and recursive resolution of domain name? Explain the zone files used in Resolving of DNS. 6

B) Explain HTTP message. 7

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