

Time: 3 hours

Max. Marks: 80

- N.B. (1) Question one is Compulsory.**
(2) Attempt any 3 questions out of the remaining.
(3) Assume suitable data if required.
-

- Q. 1 a) Compare and contrast Circuit switched network and Packet switched network 05
 b) Describe the different guided transmission medias used in the network 05
 c) What is Channel Allocation problem? explain in short pure and slotted ALOHA 05
 d) Obtain the 4-bit CRC code for the data bit sequence 10011011100 using the polynomial $x^4 + x^2 + 1$ 05
- Q 2 a) Describe in detail OSI reference model with a neat diagram 10
 b) What is Channel allocation problem? Explain CSMA/CD protocol. A network with CSMA/CD has 10 Mbps bandwidth and 25.6ms maximum propagation delay. What is the minimum frame size? 10
- Q 3 a) Compare and contrast between 10
 i) IPv4 vs IPv6
 ii) Connection oriented protocol vs Connectionless protocol
 b) Explain in brief Cisco PPDIOO Network design Methodology 10
- Q 4 a) What is SDN? Explain SDN architecture along with Operations of control and data planes 10
 b) What is Routing? What are desirable characteristics of routing algorithms? Explain distance vector routing with suitable example 10
- Q 5 a) Elaborate the architectures of NOX and POX controllers of SDN with their comparison 10
 b) Elaborate Cisco SONA Architecture in detail 10
- Q 6 Write a short note on
 a) Sliding Window Protocol 05
 b) OpenFlow messages 05
 c) NAT 05
 d) DHCP 05
-