

(3 Hours)

[Total Marks : 100

- N.B.** (1) Question No. 1 is compulsory.
(2) Attempt any four questions out of the remaining six questions as per the instructions given.
(3) Answers to sub-questions should be answered one below the other in the answersheet.

Q1[A] Draw the layered OSI network architecture .Explain the functions of each layer and show the path of actual & virtual communication between the layers. [10]

Q1[B]What is character-based framing and bit oriented framing [10]

Q2[A]What is sliding window protocol ?Explain n-bit sliding window protocol With suitable example. [10]

Q2[B]Explain following internet services :-

(i) E-mail (ii)FTP (iii)Telnet [10]

Q3[A]Explain three types of transmission impairments in communication network For extremely noisy channel give the channel capacity. What is your observation? [10]

Q3[B]List various networking protocol .Explain in detail Ethernet [10]

Q4[A]Describe Point to Point Protocol? What are the difficulties for having mobile IP? What can be the solution? [10]

Q4[B]Explain the need of encryption .Explain in detail cipher block chaining [10]

Q5[A]Explain TCP header in brief .Compare TCP and UDP [10]

Q5[B]Draw IPv4 & IPv6 header ,explain each field in brief & compare them? [10]

Q6[A]What is CSMA/CD network ?Compare the throughput or departure rate of CSMA/CD with Pure Aloha, Slotted Aloha and CSMA [10]

Q6[B]Explain the most frequently used class of Flow control methods and rate control methods [10]

Q7. Write short note on the following(any three) [20]

1)ISDN & Broadband ISDN

2)SMTP & MIME

3)Asynchronous Transfer Mode

4)X.25 networks

5)Internetworking.

