Paper / Subject Code: 41022 / Computer Network & Network Design

1T01234 - S.E.(Information Technology Engineering)(SEM-IV)(Choice Base Credit Grading System) (R- 19) (C Scheme) / 41022 - Computer Network & Network Design

QP CODE: 10041853   DATE: 12/12/2023

(3 Hours)   **Total Marks: 80**

N.B.:   **(1) Question No.1 is compulsory.**

(2) Attempt any three questions from the remaining five questions.

(3) Make suitable assumptions wherever necessary but justify your assumptions.

Q.1. a. Compare Bus and Star topology	05 M
b. List the internetworking devices and explain any one	05 M
c. Explain RLE with an example	05 M
d. Draw the UDP Header with its fields.	05 M

Q.2.a. Draw and explain the OSI model briefly.	10 M
Q.2. b. Compare the switching technologies	10 M

Q.3.a. Explain the Sliding Window Protocol with suitable diagrams	10 M
Q.3.b. Draw and explain the Fiber Optic Media and compare it with Twisted Pair	10 M

Q.4.a. What is controlled media access? Explain the controlled media access techniques.	10 M
Q.4.b. Draw the IPv4 Header and explain the header format.	10 M

Q.5.a. Compare TCP/IP and OSI	10 M
Q.5.b. Explain the distance vector routing with an example.	10 M

Q.6. Write a short note on (Any Two)   20 M

a.   Leaky bucket

b.   SMTP

c.   VLAN

d.   Image Compression Techniques

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