May 16, 2024   02:30 pm - 05:30 pm   1T01234 - S.E.(Information Technology Engineering)
(SEM-IV)(Choice Base Credit Grading System) (R- 19) (C Scheme) / 41022 - Computer
Network & Network Design   QP CODE:10054525

(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. Solve any four

a. Explain Repeater, Hub, Bridge, Switch, and Gateway.   05 M

b. Explain Token passing controlled access protocol.   05 M

c. Explain in detail Network Address Translation.   05 M

d. Compare connection oriented and connectionless lossy protocols.   05 M

e. Explain Image compression GIF and JPEG.   05 M

Q.2.a. Draw and Explain OSI reference model with neat diagram.   10 M

Q.2. b. Explain IPv4 header format with diagram.   10 M

Q.3.a. Explain CSMA protocols. Explain how collisions are handled in CSMA /CD.   10 M

Q.3.b. A bit stream 10110 is transmitted using the standard CRC method.

The generator polynomial is x^3+x^2+1. What is the actual bit string transmitted?

How will the receiver detect data received without any error?   10 M

Q.4.a.Explain following transmission media - Twisted pair, Coaxial Cable, Fiber Optic.   10 M

Q.4.b.Explain concept of sliding protocol? Compare the performance of Go-back-N and

Selective Repeat protocol.   .   10 M

Q.5.a.What is IP addressing? Explain in detail Classful and Classless IP addresses.   10 M

Q.5.b. Explain in detail TCP congestion control mechanism.   10 M

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

a. RPC

b. DNS

c. VLAN

d. SNMP

e. OSPF

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54525   **Page 1 of 1**