

15/05/2025 SE IT SEM-IV C-SCHEME CNND QP CODE: 10080737

Time: (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. Compare Twisted pair cable, Coaxial cable and Fiber optics cable. 05 M
- b. Explain Ethernet Protocol. 05 M
- c. Explain Repeater, Hub, Bridge, Switch, and Gateway. 05 M
- d. Compare lossy with lossless data compression technique. 05 M
- e. How many networks and hosts are possible using 'Class B' IP addressing? 05 M
What is subnet mask

Q.2.

- a. Draw and Explain OSI reference model with functions of each layer. 10 M
- b. Explain the difference between static and dynamic routing. Explain distance vector routing 10M

Q3.

- a) Explain in Detail TCP Header with Diagram. 10 M
- b) Explain Classful and Classless IP Address. 10 M

Q4.

- a) Generate the CRC code for a data word 110010101. The divisor 10101. Check whether there are errors in the received code word. 10M
- b) Explain the different classes of IP address. If the given IP address is 201.20.31.65, then find out the following parts: i) Class ii) Subnet Mask iii) Network ID iv) First and Last IP of the network v) First and Last Host ID in a network. 10M

Q5.

- a) Explain in detail Go-Back -N Protocol. 10M
- b) Explain in Detail CSMA Protocol. 10M

Q6. Write a short note on.(Any Four)

- a) FTP
- b) VPN
- c) RPC
- d) Image Compression