CO1- Demonstrate the concepts of data communication at physical layer and compare ISO - OSI model with TCP/IP model.

- What are the design issues for the Layers in networking? Explain ISO /OSI reference model with diagram.(6)*-10marks
- Explain TCP/IP reference model and Compare with OSI model(3)*-10marks
- What is topology? Explain types of topology.(4)*-10marks
- Explain repeater, hub, bridge, switch, gateway.(2)* -5marks
- Explain LAN,WAN,MAN.-5marks
- Compare and contrast circuit switching and packet switching.
- classify transmission media and compare them.-10marks

- Discuss different types of guided media in detail.-10marks
- What are guided unguided transmission media.(2)*-10marks
- Explain channel allocation problem

CO2- Explore different design issues at data link layer.

- Explain different framing methods. what are the advantages of variable length frame over fixed length frame?(5)*-10marks
- Explain design issues of data link layer. Explain sliding window protocol selective repeat.-10 marks
- Data link protocols almost always put the CRC in a trailer rather than in a header. Why? Give the data words 1101010110 show generation of CRC at sender site. (2)*-10 marks
- what is error detection and correction? Explain with CRC(2)*.-10 marks
- Explain Go-back-N protocol(2)* -10 marks
- Explain advantages of selective repeat over Go Back N. Compare the performance(2)*-10 marks
- Explain any two collision free protocols.
- Explain CSMA Protocols. Explain how collisions are handled in CSMA/CD.(2)*-10 marks
- Explain the purpose of flow control and error control from DLL perspective.-10 marks
- short note on Aloha and its types.-5 marks

Note:* no.of times repeated