



VIT Bhopal University
School of Computing Science and Engineering

Computer Networks (CSE3006)
B.Tech. / Int. M.Tech. (Winter Semester 2024-25)

Assignment-01

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Note: Attempt all the questions.

1. Assume six devices are arranged in a mesh topology. How many cables are needed?
How many ports are needed for each device?
2. Draw a hybrid topology with a star backbone and three ring networks.
3. List and explain different layers of OSI model.
4. List and explain different layers of TCP/IP model.
5. Match the following to one or more layers of the OSI model:
 - a. Route determination
 - b. Flow control
 - c. Interface to transmission media
 - d. Provides access for the end user
6. Distinguish between baseband transmission and broadband transmission.
7. Describe analog and digital signals with suitable example. Explain which one is more advantageous among analog and digital signals.
8. List and explain different techniques of digital-to-digital conversion.
9. List and explain different techniques of digital-to-analog conversion.
10. List and explain different techniques of Analog-to-digital conversion.
11. List and explain different techniques of Analog-to-analog conversion.