AIML:21AM404 LessonPlan1 22-23

Prerequisite(s): Communication, Sender and Receiver, Need for communication, Transmit and receive

Topic : Data Communication, Data Flow and Network, The Internet, Protocols and Standards

General Objective (GO): Students will be able to understand the overview of data communication between two devices over network and internet with the help of protocols and standards.

Department	Artificial Intelligence and Machine Learning
Degree & Semester:	B.Tech & IV
Course code & Title:	21AM404 & COMPUTER NETWORKS
Unit Title:	FOUNDATION OF NETWORKING
CO / Lesson No (GO):	1/1

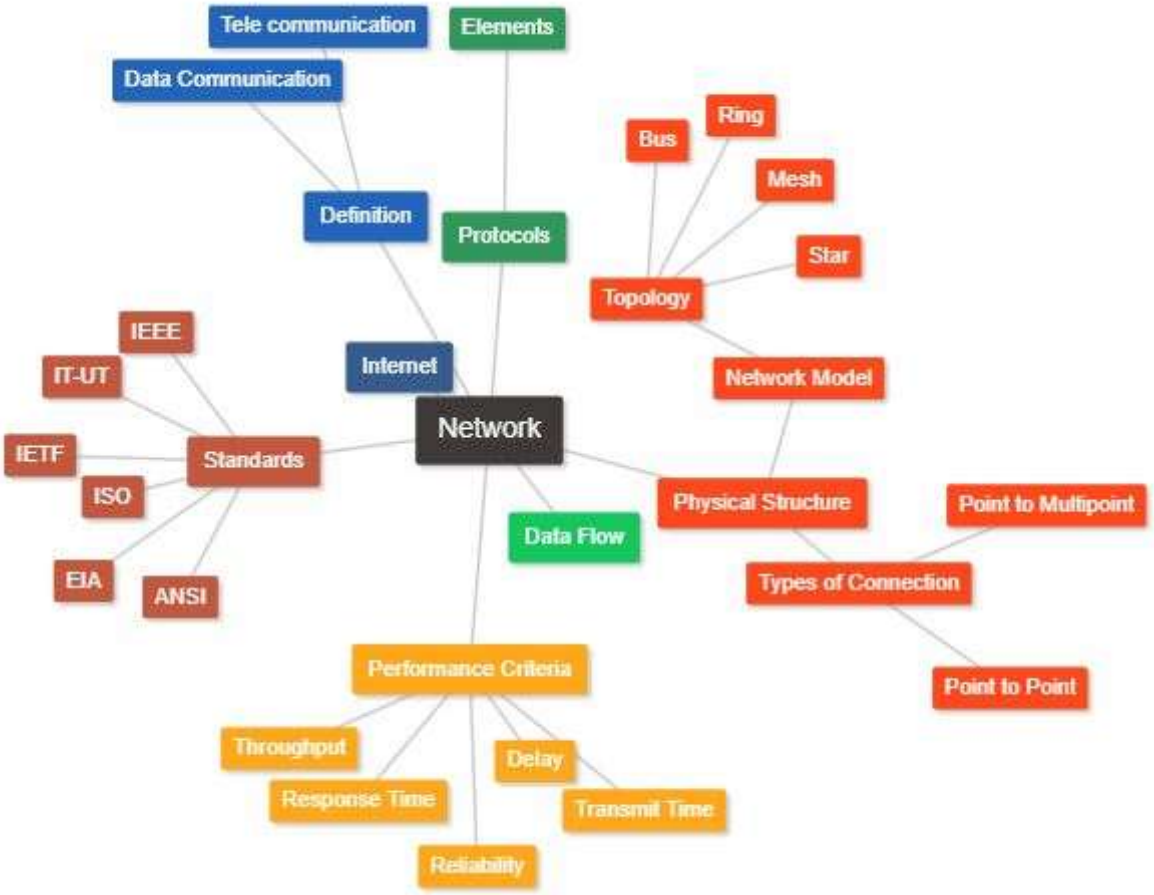
Specific Objectives (SO):

- SO1 Classify the five components involved in data communication. [U/C]
- SO2 Interpret the data representation, data flow and physical structure of a network. [U/C]
- SO3 Illustrate the five types of topologies involved in the network. [U/C]
- SO4 Infer the protocols and standards used in Internet during data communication. [U/C]

Mapping Table

SO	PO	PO/PSO Competency	PO/PSO Indicator
SO1	1	1.3	1.3.1
SO2	1,3	1.4,3.4	1.3.1,3.4.1,3.4.2
SO3	1,4	1.3,1.4	1.3.1,1.4.1
SO4	1,5	1.5,7.1	1.4.1,7.1.1

Mind map



Summary

- Data communications
  - Exchange of data between two devices
    - Characteristics
    - Components
    - Data representation
    - Data flow
    - Networks: Network criteria
      - Performance
      - Transit time
      - Response time
      - Throughput
      - Delay
      - Reliability
      - Security
    - Physical structures
      - Types of connections
        - Point-to-point
        - Multipoint
      - Types of topology
        - Mesh

        - Star
        - Bus
        - Ring
        - Hybrid
    - Network model
        - LAN
        - WAN
        - MAN
- Internet Protocols
    - Syntax
    - Semantics
    - Timings
- Standards
    - ISO
    - ITU-T
    - ANSI
    - IEEE
    - EIA

References (Books/Videos/Journals/Web references)

1. Behrouz A.Forouzan, Data Communication and Networking, 5th Edition, Tata McGraw-Hill, 2014

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5. William Stallings, Data and Computer Communication, Pearson Education, 2007

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