JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

MBA IV Semester	L	T	P	C
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(17E00406) DATA COMMUNICATION AND NETWORK ANALYSIS
(Elective V)

Objective : The objective of the course is to provide the basic concepts of Data Communication and Network Analysis, network security, privacy and data encryption.

1. **Introduction** – General structure of Networks – ISO, OSI Reference Model. Hierarchical Network, connectivity analysis – delay analysis – local access Network design.Physical layer: transmission and multiplexing – digital transmission – circuit switching packet switching – terminal handling – error correction and error correcting codes.
2. **Data – link layer**: simple protocols. Unrestricted stop and wait sliding window protocols. Network layer: virtual circuits and data grams, centralize hierarchical and broadcasting algorithms.
3. **Transportation layerand Session layer**: transport service – addressing and connection establishment – flow control and buffering – synchronization – crash recovery gate way– internet work fragmentation – session layer.
4. **Presentation layer**: network security and privacy – data encryption – key distribution authentication and digital signatures – virtual terminal protocols – file transfer protocols.
5. **Application layer** – distribution systems ISDN – Service & History, TCP/IP and Net Working and Internet working Derives.

Text Books :
- Understanding Data Communications & Networks, William A. Shay, Vikas.
- Data Communications and Net Working, Behrouz A. Forouzan, TMH

References:
- Data Communication and Computer Networks, Duck& Read, Person.
- Data Networks, Bertsekas&Gallages, PHI
- Computer Communications and Networking Technologies, Michael A. Gallo, Cengage.