

**Panipat Institute of Engineering & Technology**  
**Department of CSE-AI&DS**  
**LESSON PLAN**

**Subject: ICS**  
**Session: Jan.-June 2023-24**

**Subject code: ES-CS-AIDS- 206A**  
**Semester: 4th**

Sr. No	Topic	CO Covered	Assignment No.	Teaching Methodology
1.	Elements of communication system, Analog and Digital Signal	CO1	Assignment 1	White Board, Marker
2.	Introduction to analog and digital communication systems	CO1		White Board, Marker
3.	Introduction to analog and digital communication systems	CO1		White Board, Marker
4.	Sampling Theorem	CO1		White Board, Marker
5.	Sampling Theorem, Nyquist Criteria	CO1		White Board, Marker
6.	Quantization	CO1		White Board, Marker
7.	Pulse Code Modulation	CO1		White Board, Marker
8.	Delta Modulation	CO1		White Board, Marker
9.	Passband Digital Transmission via Carrier Modulation: ASK, FSK	CO1		White Board, Marker
10.	Passband Digital Transmission via Carrier Modulation: BPSK, QPSK	CO1		White Board, Marker
11.	Time Division Multiplexing (TDM)	CO1		White Board, Marker
12.	Frequency Division Multiplexing (FDM)	CO1		White Board, Marker
13.	Introduction to information theory	CO2	Assignment 2	White Board, Marker
14.	Information sources; average code word length	CO2		White Board, Marker
15.	Huffman encoding; Channel capacity	CO2		White Board, Marker
16.	Discrete memory less channels and capacity	CO2		White Board, Marker
17.	channel coding theorem	CO2		White Board, Marker
18.	theory and practice of error-control coding	CO2		White Board, Marker
19.	trellis diagram	CO2		White Board, Marker
20.	Viterbi algorithm	CO2		White Board, Marker
21.	Connection-type communication and connectionless-type communication	CO2		White Board, Marker
22.	Numbering plan.	CO2		White Board, Marker

23.	Telephone Network Architecture	CO3	Assignment 3	Power Point Presentation	
24.	Computer Network Architecture: Computer Network	CO3		Power Point Presentation	
25.	Computer Network Architecture: OSI Protocol, Specific Structure of the OSI Reference Model	CO3		Power Point Presentation	
26.	Internet Network Architecture: TCP/IP Protocol, TCP/IP Subprotocol Structure	CO3		Power Point Presentation	
27.	Integrated Services Digital Network, B-ISDN	CO3		Power Point Presentation	
28.	Session Initiation Protocol (SIP), Asynchronous Transfer Mode	CO3		Power Point Presentation	
29.	Concept of Intelligent Communication Systems,	CO3		Power Point Presentation	
30.	Functions of the Intelligent Processing Layer	CO3		Power Point Presentation	
31.	Structure of the Knowledge-Base System, Design Methodology for Telecommunication Services	CO3		Power Point Presentation	
32.	State-of-the-art design methodology: definition, graph theory	CO3		Power Point Presentation	
33.	Conflicts among telecommunication services, Conflict of charge policy	CO3		Power Point Presentation	
34.	High-level description of telecommunication, Application of Production Rules to Telecommunications	CO4		Assignment 4	Power Point Presentation
35.	Description of Telecommunication Services in a Semantic Network, Symbolic Logic, Predicate Logic: Definitions and Operations for Predicate Logic	CO4			Power Point Presentation
36.	Clausal Form, Herbrand Universe and the Herbrand Theorem	CO4	Power Point Presentation		
37.	Proof of Tautology, Resolution Principle	CO4	Power Point Presentation		
38.	Logical Consequence, Horn Set	CO4	Power Point Presentation		
39.	Application to Telecommunication Service.	CO4	Power Point Presentation		