



Indira Gandhi Delhi Technical University For Women

Department of Electronics and Communication Engineering

DIGITAL COMMUNICATION SYSTEMS LABORATORY



FACULTY INCHARGE

Dr. Kanchan Sharma

TECHNICAL ASSISTANT

Mr. Madhur Gupta



Indira Gandhi Delhi Technical University For Women

Department of Electronics and Communication Engineering

DIGITAL COMMUNICATION SYSTEMS LABORATORY

FACILITIES (HARDWARE)

S. NO.	EQUIPMENT/ TRAINER KIT	QUANTITY
1	FREQUENCY MODULATION USING ARMSTRONG METHOD (SILICOM)	20
2	PAM / PPM / PWM MOD. & DEMOD. (TEMFLO)	20
3	SCIENTECH FIBRE OPTIC TRAINER	06
4	GSM TRAINER (SILICOM)	02
5	CDMA DSSS TRAINER (SILICOM) – 2115	20
6	FOUR CHANNEL ANALOG TDM MOD & DEMOD TRANIER (SILICOM)	20
7	DELTA, ADAPTIVE DELTA & DELTA SIGMA MOD / DEMOD TRAINER WITH SIMTEL – TEMFOL SYSTEMS	20
8	DATA FORMATING & CARRIER MOD / TRANSMITTER TRAINER WITH SIMTEL – TEMFLO SYSTEMS	20
9	DATA REFORMATING & CARRIER DEMOD / RECEIVER TRAINER WITH SIMTEL – TEMFLO SYSTEMS	20
10	TDM PULSE AMPLITUDE MOD & DEMOD TRAINER WITH SIMTEL – TEMFLO SYSTEMS	20
11	AMPLITUDE MODULATION (SSB/DSB) TRANMITTER TRAINER – 2201 WITH SIMTEL – TEMFLO SYSTEMS	20
12	AMPLITUDE DEMODULATION (SSB/DSB) RECEIVER TRAINER – 2202 WITH SIMTEL – TEMFLO SYSTEMS	20
13	FREQUENCY DIVISION MULTIPLEXER / DEMULTIPLEXER – SILICOM	20
14	ADVANCED DIGITAL COMMUNICATION TRAINING SYSTEM – SILICOM	20
15	PCM, DPCM CVSD MOD & DEMOD – SILICOM	20
16	FOUR CHANNEL TDM PCM TR. & RX. – SILICOM	20
17	DIGITAL COMPANDING A-LAW & LAW – SILICOM	20
18	TWO CHANNEL CDMA (DSSS & FHSS) – SILICOM	20
19	WIRELESS LAN TRAINER WITH 4 WIRELESS NODES – SILICOM	02
20	ADVANCED FIBER OPTIC TRAINER DUAL CHANNEL & PC COMMUNICATION – SILICOM	20
21	SETUP TO STUDY MODE CHARACTERSTICS IN FIBER OPTICS – SILICOM	02
22	AT EXCHANGE / EPABX TR. SYSTEM WITH DTMF TELEPHONE TRAINER – SILICOM	10
23	MSK MOD / DEMOD TRAINER WITH DSO – SILICOM	20
24	16 QAM TRAINER WITH DSO – SILICOM	20



Indira Gandhi Delhi Technical University For Women

Department of Electronics and Communication Engineering

DIGITAL COMMUNICATION SYSTEMS LABORATORY

B.TECH - ECE-AI (SEMESTER-IV), ECE (SEMESTER-V)
SUBJECT CODE : BEC-210, BEC-301

Room No.- E-214

LIST OF EXPERIMENTS

- 1.To study of Time division multiplexing, Pulse code (PCM) modulation & Demodulation and observe the waveforms on Digital Storage Oscilloscope (DSO).
- 2.To study of Data formatting using NRZ (L) / NRZ (M) / RB coding techniques and observe the waveforms on Digital Storage Oscilloscope (DSO).
- 3.To study of data formating using AMI / Biphase manchester & Mark coding techniques and observe the waveforms on Digital Storage Oscilloscope (DSO).
- 4.To study of amplitude shift keying (ASK) modulation and demodulation and observe the waveforms on Digital Storage Oscilloscope (DSO).
- 5.To study of Frequency Shift Keying (FSK) modulation and demodulation and observe the waveforms on Digital Storage Oscilloscope (DSO).
- 6.To study of Phase Shift Keying (PSK) modulation and demodulation and observe the waveforms on Digital Storage Oscilloscope (DSO).
- 7.To study of front panel description of EPABX trainer kit.
- 8.To study of waveshapes of various tones generated on EPABX trainer kit on Digital Storage Oscilloscope (DSO).
- 9.To study of various features incororated in EPABX trainer kit.
- 10.To study of Minimum Shift Keying (MSK) modulation and demodulation and observe the waveforms on Digital Storage Oscilloscope (DSO).



Indira Gandhi Delhi Technical University For Women

Department of Electronics and Communication Engineering

DIGITAL COMMUNICATION SYSTEMS LABORATORY

DO'S AND DON'TS

DO'S

- Enter and leave the lab as per the time table.
- Maintain strict discipline and silence in the lab.
- Proper handling of computer systems must be done.
- Check the connections properly as per circuit diagram before switching on the power supply.
- Be a keen observer while performing experiments in the lab.
- Keep your bags in the rack and the consumable items back to their original position after finishing off the experiment in the lab.

DON'TS

- Do not leave the lab without prior permission of the Lab In-charge or Technical Assistant.
- Do not bring or eat any eatable item in the lab.
- Do not make noise or shout in the lab.
- Do not disturb the decorum or aesthetic view of the lab.
- Do not tamper with the lab or system settings.
- Do not perform the experiment with wet hands on the apparatus.