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TRAINING KITS ON DIGITAL ELECTRONIC EXPERIMENTS

CEE 2800 Basic Logic Gates using TTL IC's (7 in 1)

OBJECTIVE: To verify the truth table For TTL AND, OR. NOT, NAND,NOR, EX-OR, & EX-NOR Gates.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply for logic '1' and logic '0'. TTL IC' s for 'AND' 'OR' 'EX-OR' NOT gates & components soldered. NOR, NAND

CEE 2801 Verify Truth table for TTL IC's AND, NOT, & NAND GATES

OBJECTIVE: To verify the truth table For TTL AND, NOT, NAND Gates.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply for logic '1' and logic '0'. TTL IC' s for 'AND' NOT & NAND gates

CEE 2802 Basic Logic Gates using Discrete Components (7 in 1)

OBJECTIVE: To verify the truth table for DTL AND, OR. NOT, NAND, NOR, EX-OR, & EX-NOR Gates.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply for logic '1' and logic '0'. NOR, EX-NOR, EX-NOR Gates can be assembled using different combinations of Gates.

CEE 2803 Basic Logic Gates using Discrete Components (5 in 1)

OBJECTIVE: To verify the truth table for DTL AND, OR. NOT, NAND, NOR, Gates.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply for logic '1' and logic '0'. NAND & NOR Gates can be assembled using different combinations of Gates.

CEE 2804 Verification of Boolean Identities & Demorgan's Theorems

OBJECTIVE: To verify the truth table of 3 input AND, OR, NAND, NOR, Gate single input NOT Gates, Boolean expression & Demorgan's Theorems.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply, 4 SPDT switch provided for selecting logic '1' And logic '0', 2 Red LED output indicators.

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CEE 2806 Verification of Truth Table of Logic Gates

OBJECTIVE: To verify the truth table of AND Gate, OR Gate, NAND Gate, NOR Gate, NOT Gate using NAND & NOR Gate

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply, 2 logic '1' and 2 logic '0', inputs are provided on `sockets. 2 Red LED output Indicators.

CEE 2807 Study of 4 Bit Adder and Substractor.

OBJECTIVE: To study the 4 Bit Adder & Subtractor using IC 7483.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply, 4 logic inputs selectable using SPDT switches, 4 output LED indicators.

CEE 2808 Digital Trainer Kit to Verify Adders & Subtractor

OBJECTIVE: To verify the truth table of Digital Half Adder, Half subtractor. Full Adder & Full Subtractor using OR, AND, EX-OR & NOT Gates.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply 4 SPDT switches provided for selecting logic '1' And logic '0', 2 Red LED output indicators, 2 two input 'AND' Gates, 2 'NOT' Gates & 2 EX-OR Gates.

CEE 2809 Digital Trainer to Verify Half Adder

OBJECTIVE: To Study of HALF ADDER. The module is self contained with built in power supply.

SPECIFICATION: Instrument comprises One EX-OR Gate (IC No. 7486) One AND GATE (IC No. 7408) Two INPUT LOGIC provided with LED,s for HIGH (1) and LOW (0). Two LED output Indicator with Socket. DC Regulated power supply of 5V.

CEE 2814 Digital Trainer to Study & Verify Truth Tables of Flip Flops.

OBJECTIVE: To study & verify the truth table of 'RS', 'D' Type 'JK' & 'JK' Master Slave flips flops using TTL IC's.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply, 4 logic inputs logic '1' and logic '0', selectable Using SPDT switches. 1Hz monoshot clock pulse, Two Output indicators, connections for inputs & output Brought out on the sockets,

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CEE 2820 Study of 4 Bit Ripple Counter (Forward & Reverse).

OBJECTIVE: To verify the truth table 4 Bit Forward & Reversing Counter using 4 JK flip flop.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply 1Hz monoshot clock pulse, two output Indicators.

CEE 2821 Study of 4 Bit Ripple Counter (Forward, Reverse & Module).

OBJECTIVE: This MODULE has been designed to study of 4 BIT RIPPLE COUNTER. The module is self contained with built in power supply.

SPECIFICATION: Provision to convert 4 Bit Forward counter to decade Counter/Module counter using 4 input NAND Gate.

CEE 2822 Study of 4 Bit BCD Counter/Decimal to Binary Encoder

OBJECTIVE: To convert decimal input to binary output using IC 7490.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated PowerSupply. 1Hz monoshot clock pulse, Four output Indicators.

CEE 2823 Study of 4 Bit BCD Counter/Decimal to Binary Encoder

OBJECTIVE: To convert decimal input to binary output using NAND Gate.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply. 10 logic inputs selectable using SPDT switches, Four output Indicators.

CEE 2824 Study of 4 Bit up Down Counter.

OBJECTIVE: To study and verify Truth Table of 4 bit Up & Down Counter using IC 74193.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated P/S 4 SPDT switches provided for selecting logic '1' & logic '0' 1Hz monoshot clock pulse, four output Indicators two switches for selecting up or down Counting & to reset the counter.

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CEE 2825 Study of Left, Right & Programmable Shift Register.

OBJECTIVE: To study and verify truth Table of left, Right & Programmable Shift Register using IC 7495.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply. 4 SPDT switches provided for selecting logic '1' & logic '0' 1Hz monoshot clock pulse, four output Indicators two switches for serial input & model control.

CEE 2826 Study of Encoder & Decoder Circuit

OBJECTIVE: To study Decimal to BCD Encoder & BCD to 7 segment Decoder.(Decimal to BCD Encoder & BCD to 7 segment Decoder).

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply 4 SPDT switches provided for Selecting logic '1' And logic '0', 1Hz monoshot clock pulse, Four output Indicators.

CEE 2827 Study of 4-1 line (Four input & one output) Multiplexer

OBJECTIVE: To study 4-1 line Multiplexer using AND, OR, & NOT Gate.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply. 6 logic inputs selectable using toggle switches.One output Indicators.

CEE 2828 Study of 4-1 line (Four input & one output) Multiplexer

OBJECTIVE: To study 4-1 line Multiplexer circuit using IC 74153.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply, 6 sockets for logic '1' & logic '0' each, one output indicator.

CEE 2830 Study of 16-1 line Multiplexer

OBJECTIVE: This module has been designed to Study of 16 TO 1 LINE MULTIPLEXER using IC 74150. The module is self contained with built in power supply.

SPECIFICATION: Instrument comprises Pre-wired circuit detailed diagram printed on the top of panel. The integrated circuit is provided 74150 . Three Input Logic provided with LED's and sockets. One output LED indicator provided with socket. DC Regulated power supply of 5V.

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CEE 2834 Study of RAM (Random Access Memory) Circuit.

OBJECTIVE: To study and verify the truth table of RAM Circuit.

SPECIFICATION: Instrument comprises 5V/150mA DC Regulated Power Supply. 10 logic inputs selectable using SPDT switches, 4 LED output indicators, IC 7489 placed inside.

CEE 2835 Logic Gate Circuit Trainer (Bread Board Model)

OBJECTIVE:

1. Study and verify truth tubes of Logic Gates.
2. Verification of Boolean Identities & Demogran's Theorems.
3. Study and verify truth table of Digital Adders and Subtractors.
4. Study of Flip-Flop and verification of their Truth Tables.
5. Study of Counters, Shift Registers and Verification of their Truth Tables
6. Study of Encoders, Decoders and verification of their Truth Tables
7. Study of Multiplexers, Demultiplexers and verifications of their Truth Tables.

SPECIFICATION: Instrument comprises of two DC Regulated Power Supplies of 5V DC/1Amp & + 15V DC/150mA, 10 logic Inputs with LED indicators selectable using SPDT Switches, 1Hz monoshot clock pulse with pulser switch, Pulse Generator consists of 1Hz, 1KHz and 1MHz clock Pulses. 3 seven segment display mounted on front panel.

CEE 2836 Analog to Digital Converter & Digital Analog Convertor.

OBJECTIVE: To study Analog to Digital & Digital to Analog convertors Using R-2R network & Successive Approximation Method.

SPECIFICATION: Instrument comprises of DC Regulated Power Supply 5V DC/150m, 0-10V DC/150mA, ± 15V DC/150mA, 1 Volt Meter, SPDT Switches provided for selecting logic '1' & logic '0' one output indicator.

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CEE 2837 Analog to Digital (D/A) Converter

OBJECTIVE: To study Digital to Analog Converter using R-2R Network & Weighted Register Network.

SPECIFICATION: Instrument comprises of DC Regulated Power Supply 5VDC/150mA, ± 15V DC/150mA, 1volt Meter, 4 SPDT Switches provided for selecting logic '1'& logic '0' one output indicator.

CEE 2838 Study of Arithmetic Logic Unit (ALU)

OBJECTIVE: To study the different operations performed by a Arithmetic / Unit IC 74181.

SPECIFICATION: Instrument comprises of fixed output DC Regulated Power Supply 5V, 12V logic input selectable using SPDT Switch, 8 logic output indicators & IC 74181.

CEE 2840 Study of D To A Converter

OBJECTIVE: To study the DAC 0808 Apparatus to study the operation of IC 0808.

SPECIFICATION: Instrument comprises of + 5V DC Power Supply, IC 0808 and IC 741, Eight Digital Input Logics and One Voltmeter (199.9 mV - 1.999V).

CEE 2841 Study of A To D Converter (Combined Discrete Components)

OBJECTIVE: To study the operation of IC 0809 & op-amp Network as a Analog to Digital Converter.

SPECIFICATION: Instrument comprises of 1.Pre wired circuit detailed diagram for A/D convertor printed on the top of panel. The components are placed inside. 2.Separate Analog Signal for both AD Converter circuits. 3.Separate output LED indicator for both AD Converter circuits. 4.One, 0-10V DC Regulated power supply & one +5V DC Regulated Power supply and One ±12V DC Regulated Power Supply. 5.One 1.999V- 19.99V DC volt meter with terminals on front panel.

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CEE 2842 Study of D To A Converter (Combined Discrete Components)

OBJECTIVE: DAC Apparatus to study the operation of IC 0808 and R-2R Ladder Network as a Digital to Analog Converter.

SPECIFICATION: Instrument comprises of 1. + 5V & ± 12V DC Regulated Power Supply.
2. IC 0808 and R-2R Ladder Network.
3. Eight Digital Input Logics. 4. One Voltmeter (1.999V - 19.99V).

CEE 2843 Study of 4 BIT SIPO & SISO Register

OBJECTIVE: To study the operation of a 4 BIT Serial in Parallel Out & Serial Out Shift Register

SPECIFICATION: Instrument comprises of +5 V DC Regulated Power Supply, Two no. Logic Input & four no. Output Indicators & One no. CLK Pulser. Complete Circuit diagram Flip-Flops.

CEE 2844 Study of 4 BIT PIPO & PISO Register

OBJECTIVE: To study the operation of a 4 BIT Parallell in Parallel Out & Parallel Out Shift Register

SPECIFICATION: Instrument comprises of +5 V DC Regulated Power Supply, Five no. Logic Input & five no. Output Indicators & One no. CLK Pulser.

CEE 2845 Study of 8-1 Line Demultiplexer / Decoder

OBJECTIVE: To study the operation of a 1-8 Line Demultiplexer / Decoder IC

SPECIFICATION: Instrument comprises of +5 V DC Regulated Power Supply, Three no. Logic Input & Eight no. Output LED Indicators 1-8 Line Demultiplexer IC 74138

CEE 2846 Study of 1-8 Line Multiplexer

OBJECTIVE: To study the operation of a 8-1 Line Multiplexer

SPECIFICATION: Instrument comprises of +5 V DC Regulated Power Supply, Eight no. Logic Input & One no. Output LED Indicators 8-1 Line Multiplexer IC 74151

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