Lesson Plan

Name of Faculty : VIJAY
Discipline : COMPUTER ENGG.
Semester : 1ST
Subject : ELECTRONICS SHOP
Lesson Plan
Duration : 15 Weeks
Work Load (Lecture/Practical) per Week (in Hours): Lecture – 0, Practical – 06

Week		Practical
	PRACTICAL DAY	
1ST WEEK	1	UNIT - I **Basic Electronic Components** 1.1 Concept of Resistors, Color Coding, Tolerance, Maximum power rating, Application of LDR. 1.2 Classification of Capacitors, Coding of capacitors-using numerals, directly printed valueson capacitors, Ceramic capacitor and Electrolytic capacitor.
	2	UNIT - I **Basic Electronic Components** 1.1 Concept of Resistors, Color Coding, Tolerance, Maximum power rating, Application of LDR. 1.2 Classification of Capacitors, Coding of capacitors-using numerals, directly printed valueson capacitors, Ceramic capacitor and Electrolytic capacitor.
2ND WEEK	1	1.3 Concept of Inductors 1.4 Testing of components using Multi meter/LCR Q-meter
	2	1.3 Concept of Inductors 1.4 Testing of components using Multi meter/LCR Q-meter
3RD WEEK	1	UNIT - II **Soldering & De-soldering** 2.1 Identify different types of soldering guns and practice soldering of different electronic active and passive components and IC bases on lug boards and PCBs.
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4TH WEEK	1	2.2 Join the broken PCB track and test 2.3 Practice de-soldering using pump and wick 2.4 Prepare component for soldering. 2.5 Demonstrate soldering and de-soldering using soldering and de-soldering stations.
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5TH WEEK	1	UNIT - III **Active Electronic Components**

		3.1 Identify different types of mains transformers and their testing. 3.2 Identify the primary and secondary transformer windings and test the polarity. 3.3 Identify different sizes, shapes of cores used in low capacity transformers.
	2	UNIT - III **Active Electronic Components** 3.1 Identify different types of mains transformers and their testing. 3.2 Identify the primary and secondary transformer windings and test the polarity. 3.3 Identify different sizes, shapes of cores used in low capacity transformers.
6TH WEEK	**1ST SESSIONAL EXAM**	
7TH WEEK	1	3.4 Measure the primary and secondary voltage of different transformers. 3.5 PN junction diode: Terminal Identification, setting on bread board and testing. 3.6 Zener diode: Terminal Identification, setting on bread board and testing. 3.7 LED, Photo diode :Terminal Identification, setting on bread board and testing.
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8TH WEEK	1	3.8 Integrated Circuits (ICs) like 7404, 7408, 7432, 7805, 555, 741: Pin diagram, Identification, setting on bread board and testing. 3.9 Switches, Application of Toggle, Rotary, push to on & push to off 3.10 Relays and application of General purpose relay
	2	3.8 Integrated Circuits (ICs) like 7404, 7408, 7432, 7805, 555, 741: Pin diagram, Identification, setting on bread board and testing. 3.9 Switches, Application of Toggle, Rotary, push to on & push to off 3.10 Relays and application of General purpose relay
9TH WEEK	1	UNIT - IV **Electronic Testing Equipments** 4.1 Power Supply, DC power supply, Concept of Dual power supply 4.2 Cathode Ray Oscilloscope (CRO), CRO probes, Front panel controls, AC/DC voltage measurement, Frequency measurement, wave form generation. 4.3 Function Generator, Front panel controls, Functions: sine wave, square wave, triangular wave and Amplitude measurement.
	2	UNIT - IV **Electronic Testing Equipments** 4.1 Power Supply, DC power supply, Concept of Dual power supply 4.2 Cathode Ray Oscilloscope (CRO), CRO probes, Front panel controls, AC/DC voltage measurement, Frequency measurement, wave form generation.

		4.3 Function Generator, Front panel controls, Functions: sine wave, square wave, triangular wave and Amplitude measurement.
10TH WEEK	1	4.4 Digital Multi Meter, Front panel controls of DMM 4.5 Study of AC and DC Waveforms 4.6 Construction of various electronic circuits on breadboard Circuits like: rectifiers, filter circuits, clipper, clamper, transistor amplifiers, logic gates, LED driver circuit, power supply, etc 4.7 Testing of outputs of various electronic circuits using test Equipment.
	2	4.4 Digital Multi Meter, Front panel controls of DMM 4.5 Study of AC and DC Waveforms 4.6 Construction of various electronic circuits on breadboard Circuits like: rectifiers, filter circuits, clipper, clamper, transistor amplifiers, logic gates, LED driver circuit, power supply, etc 4.7 Testing of outputs of various electronic circuits using test Equipment.
11TH WEEK	**2ND SESSIONAL EXAM**	
12TH WEEK	1	UNIT - V **AC and Electrical Cables** 5.1 Identify the Phase, Neutral and Earth on power Socket. 5.2 Construct a test lamp and use it to check mains.
	2	UNIT - V **AC and Electrical Cables** 5.1 Identify the Phase, Neutral and Earth on power Socket. 5.2 Construct a test lamp and use it to check mains.
13TH WEEK	1	5.3 Use a Tester to monitor AC power. 5.4 Measure the voltage between phase and ground and rectify earthing. 5.5 Identify and test different AC mains cables.
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14TH WEEK	1	5.6 Skin the electrical wires /cables using the wire stripper and cutter. . 5.7 Prepare the mains cable for termination.
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15TH WEEK	**3RD SESSIONAL**	