

**Lesson Plan for 1st Semester started w.e.f 04-08-2025**  
**G.G.N.J. Govt. Polytechnic Jhajjar**

**Name of the Teacher with Designation** : Mukesh Kumar - FMI

**Discipline** : Computer Engg.

**Semester** : 1<sup>st</sup> Semester

**Subject** : EWS - I (Electronic Work Shop)

**Lesson Plan Duration** : 15 weeks (From **04.08.2025** to **26.11.2025**)

**Work Load ( Lecture / Practical ) per week ( In hours ) : Lectures : Nil , Practicals : 03**

WEEK	PRACTICAL Hours & Groups	TOPIC
1 <sup>st</sup>	3 Hrs. G1	<b>Basic Electronic Components</b> 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 values on capacitors, Ceramic capacitor and Electrolytic capacitor.
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
2 <sup>nd</sup>	3 Hrs. G1	1.3 Concept of Inductors 1.4 Testing of components using Multi meter/LCR Q-meter
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
3 <sup>rd</sup>	3 Hrs. G1	<b>Soldering &amp; De-soldering</b> 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. 2.2 Join the broken PCB track and test
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
4 <sup>th</sup>	3 Hrs. G1	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
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	

5 <sup>th</sup>	3 Hrs. G1	<b>Active Electronic Components</b> 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 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
6 <sup>th</sup>	3 Hrs. G1	3.3 Identify different sizes, shapes of cores used in low capacity transformers. 3.4 Measure the primary and secondary voltage of different transformers.
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
7 <sup>th</sup>	3 Hrs. G1	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 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
8 <sup>th</sup>	3 Hrs. G1	3.7 LED, Photo diode :Terminal Identification, setting on bread board and testing. 3.8 Integrated Circuits (ICs) like 7404, 7408, 7432, 7805, 555, 741: Pin diagram, Identification, setting on bread board and testing.
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
9 <sup>th</sup>	3 Hrs. G1	3.9 Switches, Application of Toggle, Rotary, push to on & push to off 3.10 Relays and application of General purpose relay <b>Electronic</b>
	3 Hrs. G2	
	3 Hrs. G1	
	3 Hrs. G2	
10 <sup>th</sup>	3 Hrs. G1	<b>Testing Equipments</b> 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,
	3 Hrs. G2	
	3 Hrs. G1	

	<b>3 Hrs. G2</b>	Frequency measurement, wave form generation. 4.3 Function Generator, Front panel controls, Functions: sine wave, square wave, triangular wave and Amplitude measurement.
<b>11<sup>th</sup></b>	<b>3 Hrs. G1</b>	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
	<b>3 Hrs. G2</b>	
	<b>3 Hrs. G1</b>	
	<b>3 Hrs. G2</b>	
<b>12<sup>th</sup></b>	<b>3 Hrs. G1</b>	4.7 Testing of outputs of various electronic circuits using test Equipment. <b>AC and Electrical Cables</b> 5.1 Identify the Phase, Neutral and Earth on power Socket. 5.2 Construct a test lamp and use it to check mains.
	<b>3 Hrs. G2</b>	
	<b>3 Hrs. G1</b>	
	<b>3 Hrs. G2</b>	
<b>13<sup>th</sup></b>	<b>3 Hrs. G1</b>	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. 5.6 Skin the electrical wires /cables using the wire stripper and cutter.
	<b>3 Hrs. G2</b>	
	<b>3 Hrs. G1</b>	
	<b>3 Hrs. G2</b>	
<b>14<sup>th</sup></b>	<b>3 Hrs. G1</b>	5.7 Prepare the mains cable for termination. 5.8 Measure AC and DC voltages using multi meter 5.9 Replace the fuse, battery for the given multimeter
	<b>3 Hrs. G2</b>	
	<b>3 Hrs. G1</b>	
	<b>3 Hrs. G2</b>	
<b>15<sup>th</sup></b>	<b>3 Hrs. G1</b>	Practice, Viva & Revision
	<b>3 Hrs. G2</b>	
	<b>3 Hrs. G1</b>	
	<b>3 Hrs. G2</b>	