SYNERGY SCHOOL OF ENGINEERING, DHENKANAL
DEPARTMENT OF ELECTRICAL ENGINEERING

Dicipline: All Branch	**1st Year**	**Name of the teaching faculty :- Mr. Amarendra Behera, Mrs. Prajna paramita Kabi, Mr. Manmohan Panda**		
Subject:- Fundamentals of Electrical & Electronics Engineering Lab	**No. of Days/week class Allotted :-1**	**No. of Weeks :-33** **SESSION- 2026-2027** **STARTING DATE: 17.08.2026** **ENDING DATE:**		
No. of week	**No. of class**	**Topic to be Taught**	**Date of Delivery**	
			G-1	**G-2**
1st	1st	Introduction Class		
2nd	2nd	Determine the permeability of magnetic material by plotting its B-H curve		
3rd	3rd	Measure voltage, current and power in 1-phase circuit with resistive load		
4th	4th	Study of 1-phase transformer (structure).		
5th	5th	Connect single phase transformer and measure input and output quantities. Also determine the transformation ratio(K).		
6th	6th	Connect single phase transformer and measure input and output quantities. Also determine the transformation ratio(K).		
7th	7th	Study of different parts of DC machines.		
8th	8th	Study of PMMC, MI types of instruments (ammeter, voltmeter).		
9th	9th	Study of PMMC, MI types of instruments (ammeter, voltmeter).		
10th	10th	Study of PMMC, MI types of instruments (wattmeter, energy meter)		
11th	11th	Wiring Connection of Fluorescent lamp/tube light.		
12th	12th	Wiring Connection of Fluorescent lamp/tube light.		
13th	13th	Prepare an electrical switch board to control one light point, one plug point, one fan point and a fuse.		
14th	14th	Prepare an electrical switch board to control one light point, one plug point, one fan point and a fuse.		
15th	15th	Prepare a report on power billing(monthly) of a domestic single phase wiring system.		
16th	16th	Prepare a report on power billing(monthly) of a domestic single phase wiring system.		
17th	17th	Identify various passive and active electronics components		
18th	18th	Connect resistors in series and parallel combination and measure its value using digital multimeter		
19th	19th	Connect resistors in series and parallel combination and measure its value using digital multimeter		
20th	20th	Connect capacitors in series and parallel combination and measure its value using multimeter		
21st	21st	Use multimeter to measure the value of given resistor and determine the value to confirm with colour code		
22nd	22nd	Use multimeter to measure the value of given resistor and determine the value to confirm with colour code		
23rd	23rd	Test the PN-junction diode and LED using digital multimeter.		
24th	24th	Test the performance of PN-junction diode		
25th	25th	Test the performance of PN-junction diode		
26th	26th	**Test the performance of Zener diode**		
27th	27th	Test the performance of Zener diode		

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28th	28th	Study of half wave and full wave rectifier		
29th	29th	Study of half wave and full wave rectifier		
30th	30th	Study of half wave and full wave rectifier		
31st	31st	Identify three terminals of a transistor using digital multimeter		
32nd	32nd	Familiarization with different types of logic gates.		
33rd	33rd	Familiarization with different types of logic gates.		

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