



ASTABLE & MONOSTABLE MULTIVIBRATOR

US05CPHY25

By

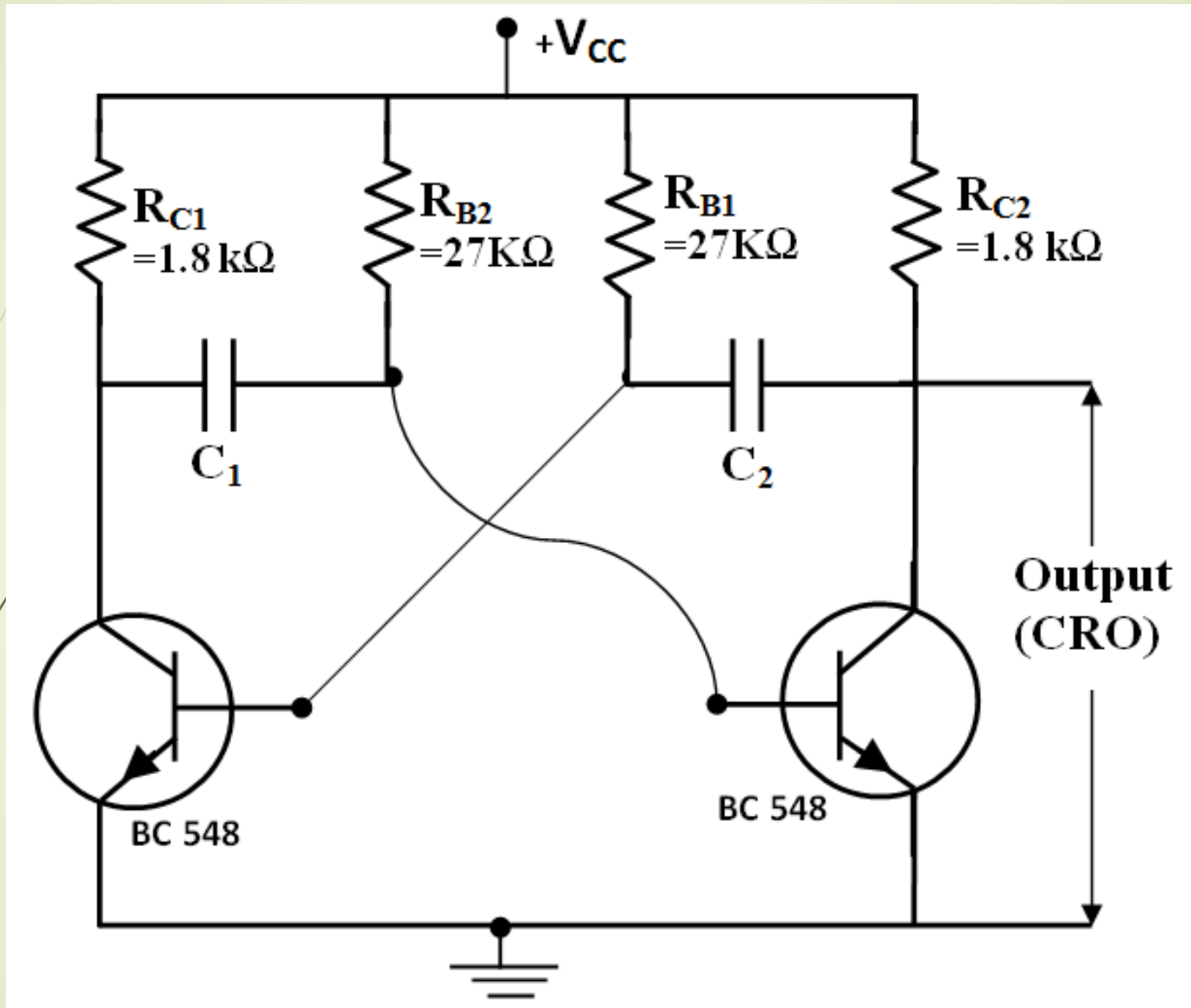
Dr. Jagendra K. Baria
Professor Of Physics

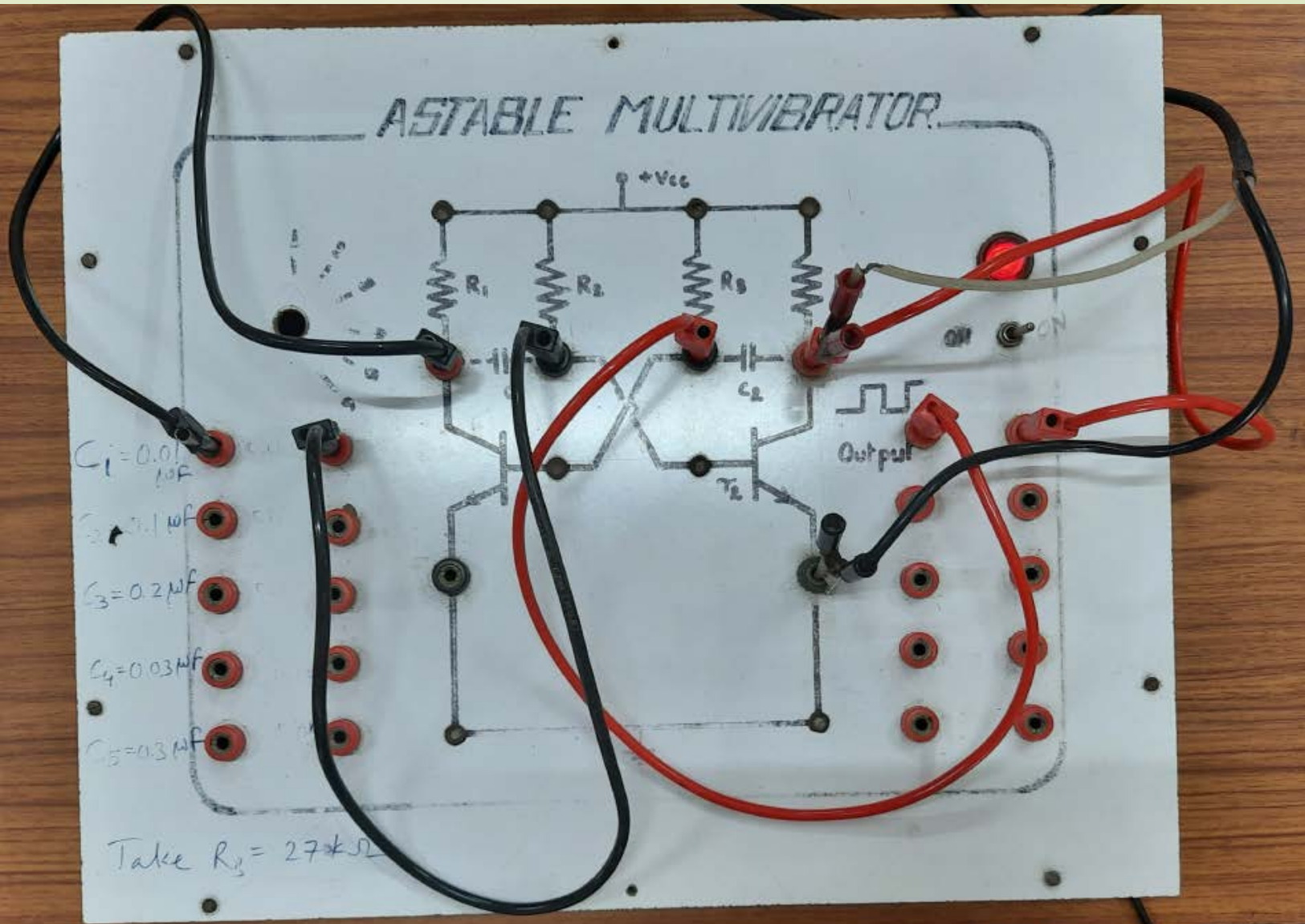
V. P. & R. P. T. P. Science College
Vidyanagar 388 120

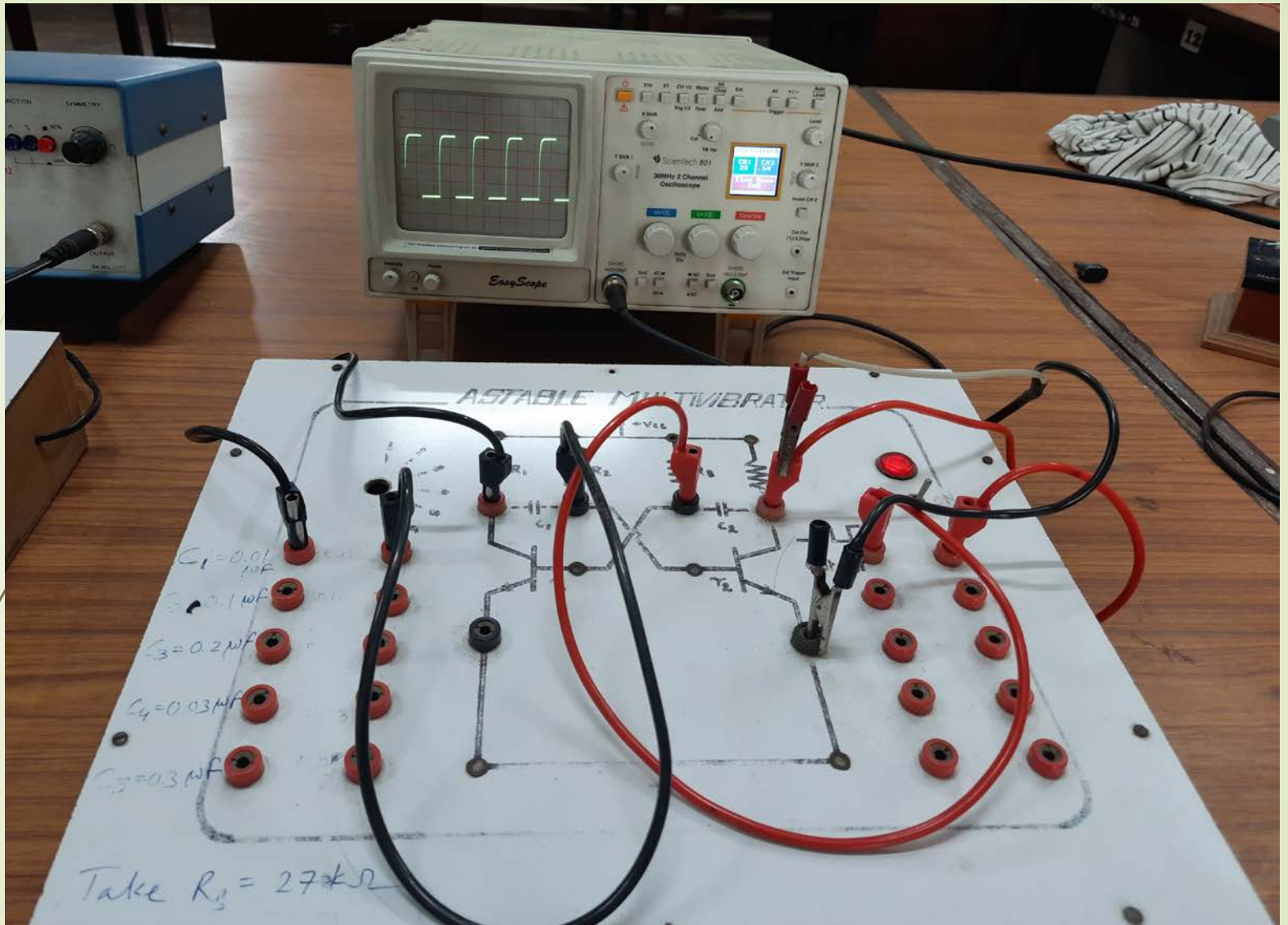


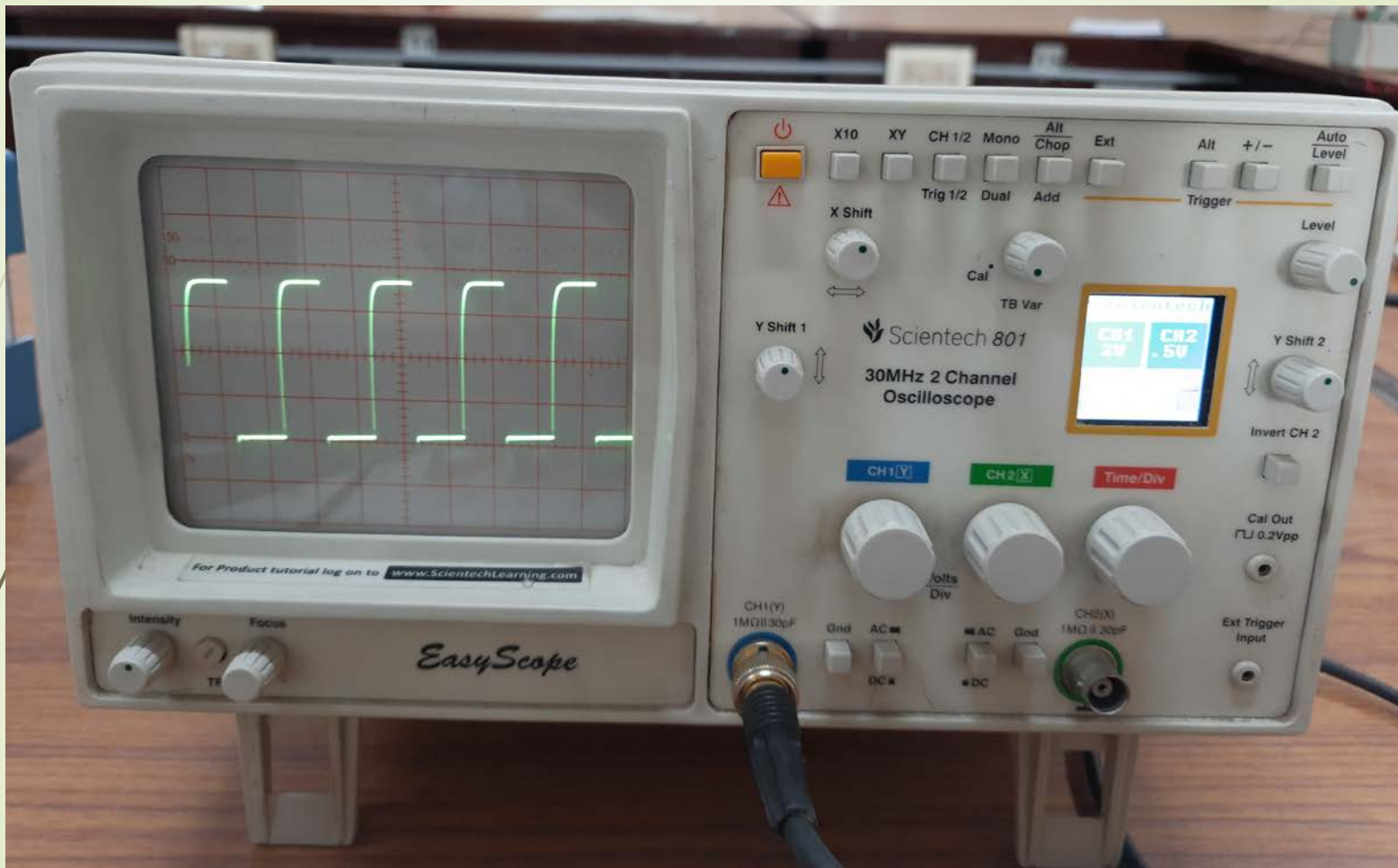
ASTABLE MULTIVIBRATOR CIRCUIT DIAGRAM:

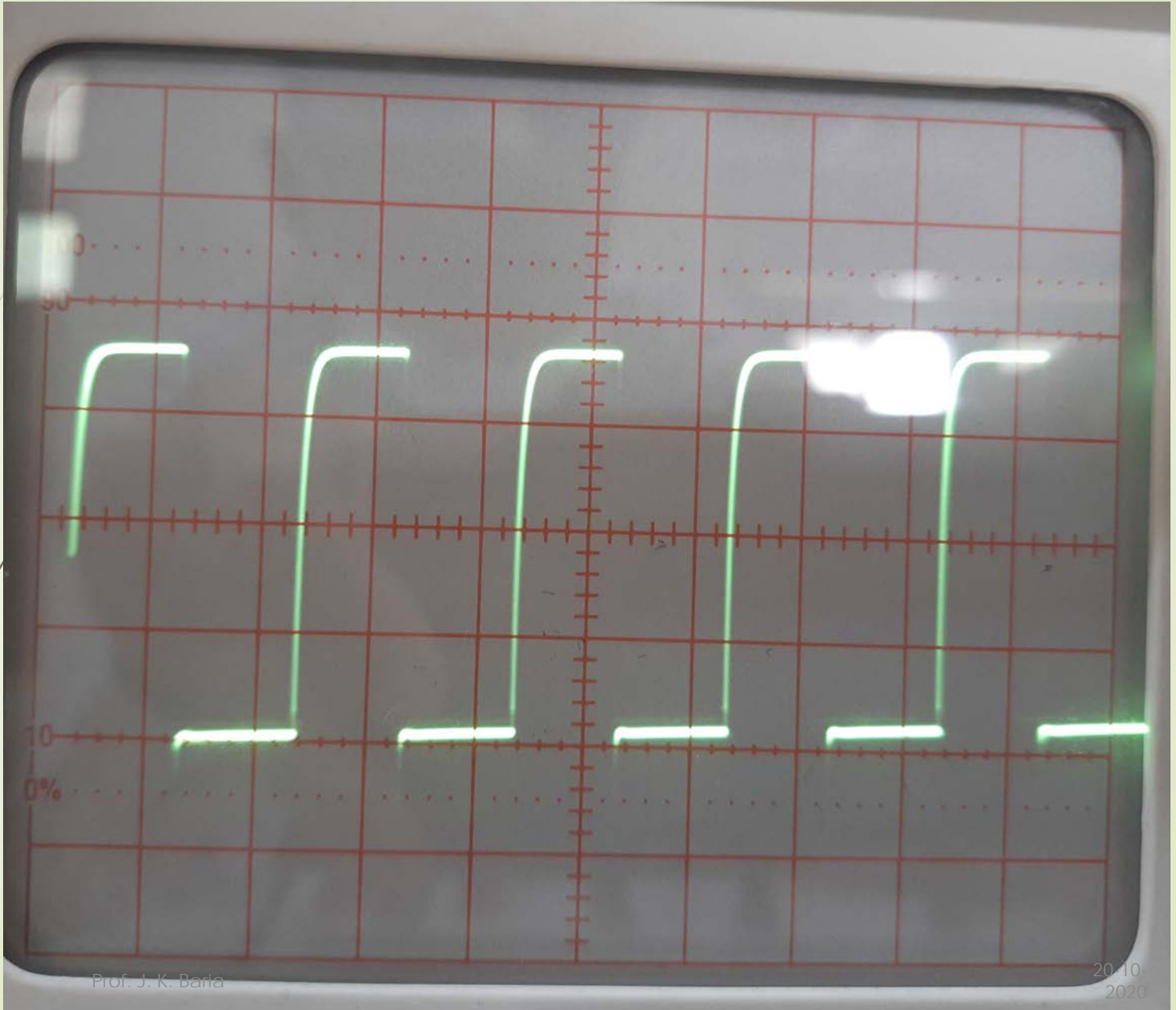
2









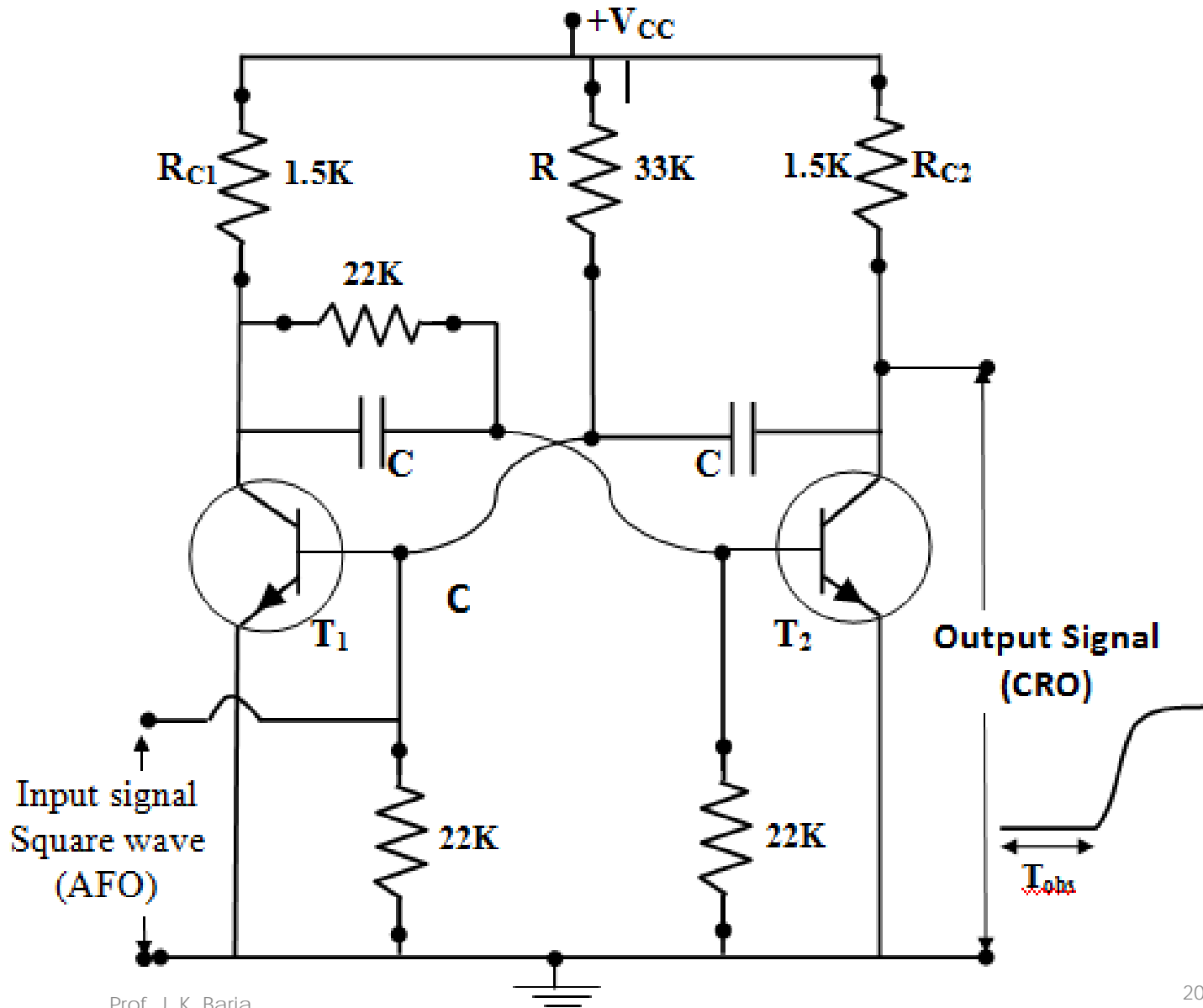


OBSERVATION TABLE:

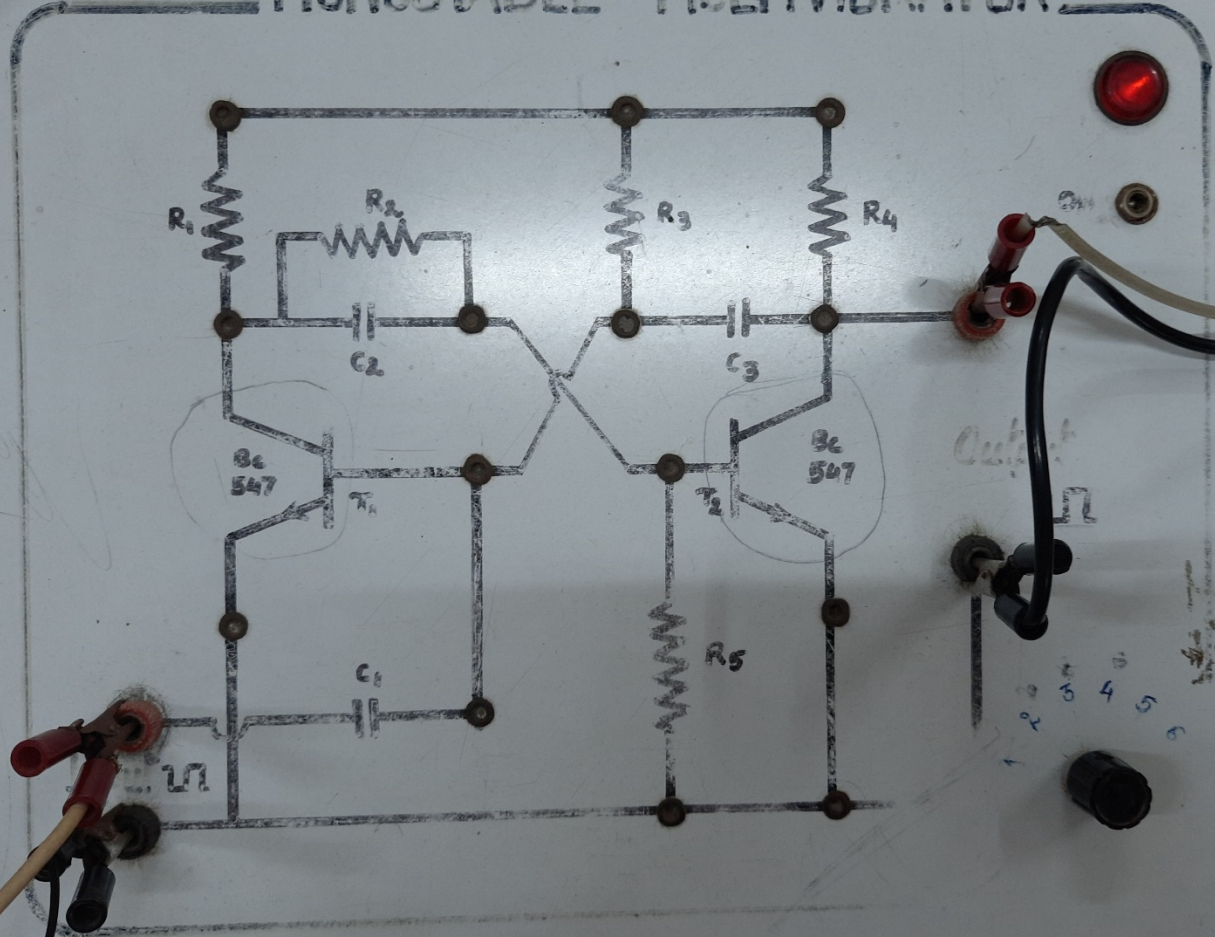
Obs. No.	Capacitance $C_1 = C_2 = C$ μF	Theoretical		Observed	
		Periodic Time $T_{th} = 2 \times 0.69 R_B C$ sec	Frequency $F_{th} = 1/T_{th}$ Hz	Periodic Time $T = \text{div} \times \text{scale}$ sec	Frequency $F = 1/T$ Hz
1	0.01	3.726×10^{-3}	2680	0.4×10^{-3}	2500
2	0.1	37.26×10^{-3}	268	4×10^{-3}	250
3	0.2	74.52×10^{-3}	134.10	4.3×10^{-3}	111.6
4	0.03	1.11×10^{-3}	894.60	1.2×10^{-3}	833
5	0.3	11.17×10^{-3}	89.46	1.2×10^{-2}	80.64

MONOSTABLE MULTIVIBRATOR CIRCUIT DIAGRAM

8



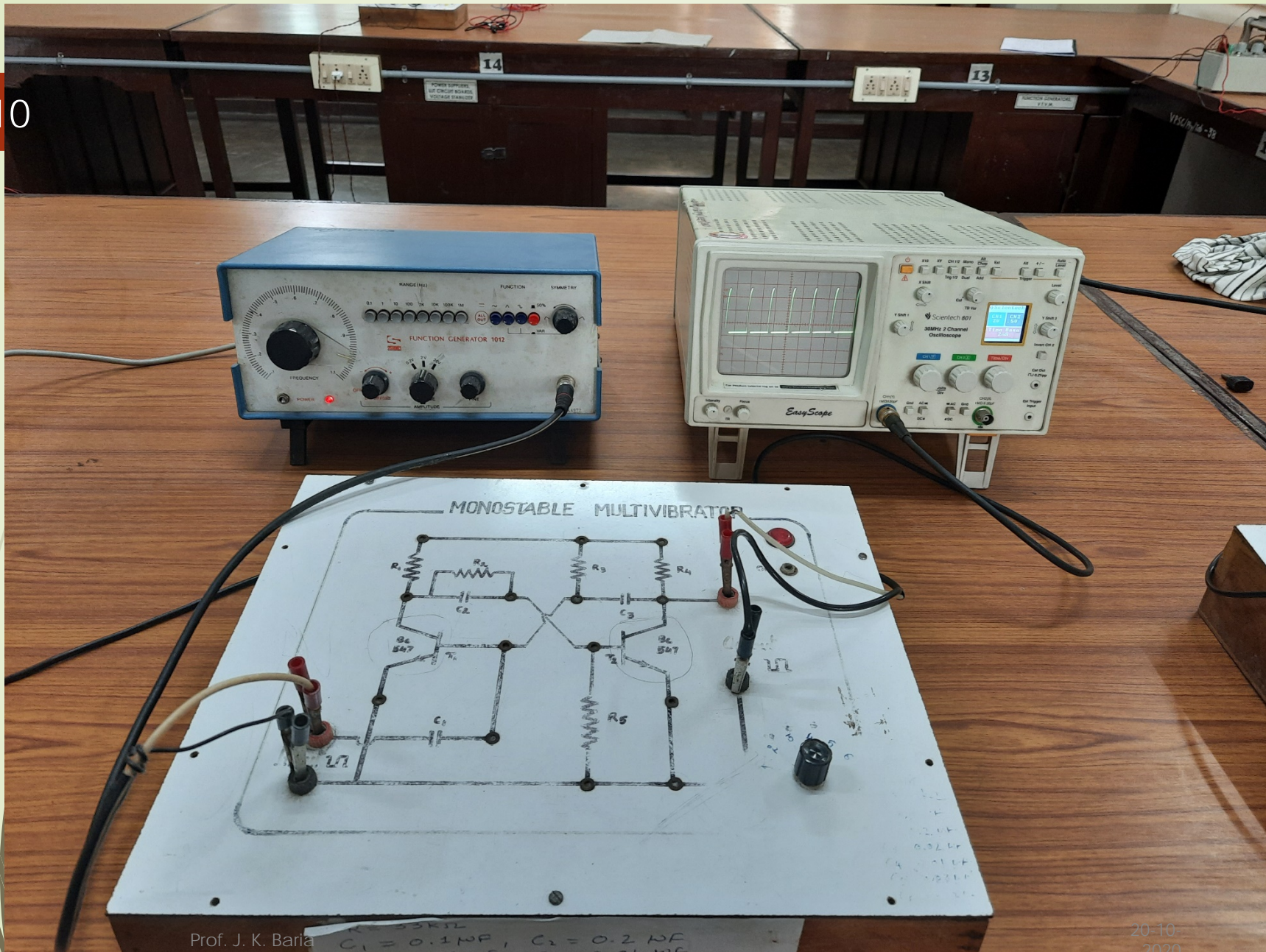
MONOSTABLE MULTIVIBRATOR



Output

1 2 3 4 5

1.2 uF
0.02 uF
0.01 uF
10k



OBSERVATION TABLE:

11

Obs. No.	R K Ω	C μ f	Delay time	
			Calculated $T_c = 0.69RC$ Sec	Observed From CRO $T_{obs.}$ Sec
1	33	0.1	2.77×10^{-3}	2.7×10^{-3}
2	33	0.2	4.554×10^{-3}	4.8×10^{-3}
3	33	0.02	0.4554×10^{-3}	0.52×10^{-3}
4	33	0.01	0.227×10^{-3}	0.4×10^{-3}
5	33	0.30	6.831×10^{-3}	0.86×10^{-3}
6	33	0.47	10.7019×10^{-3}	11×10^{-3}