Date: 21/4/21

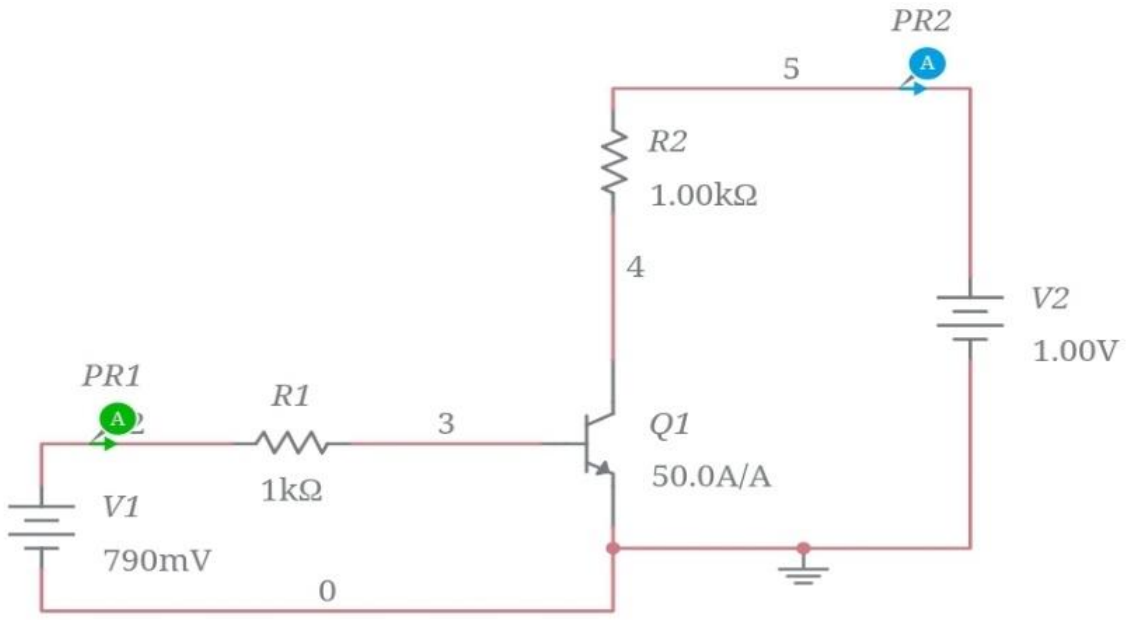
Experiment no. 5

Objective: Study on Bipolar Junction Transistor characteristics for Common Emitter configuration

Software used: Multisim Live

Theory: The transistor is a two junction, three terminal semiconductor device which has three regions namely the emitter region, the base region, and the collector region. There are two types of transistors. An npn transistor has an n type emitter, a p type base and an n type collector while a pnp transistor has a p type emitter, an n type base and a p type collector.

Circuit diagram:

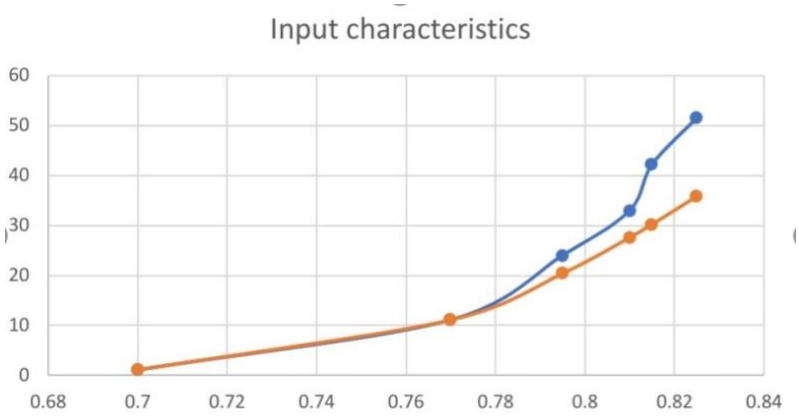


Results & observations:

Observations:

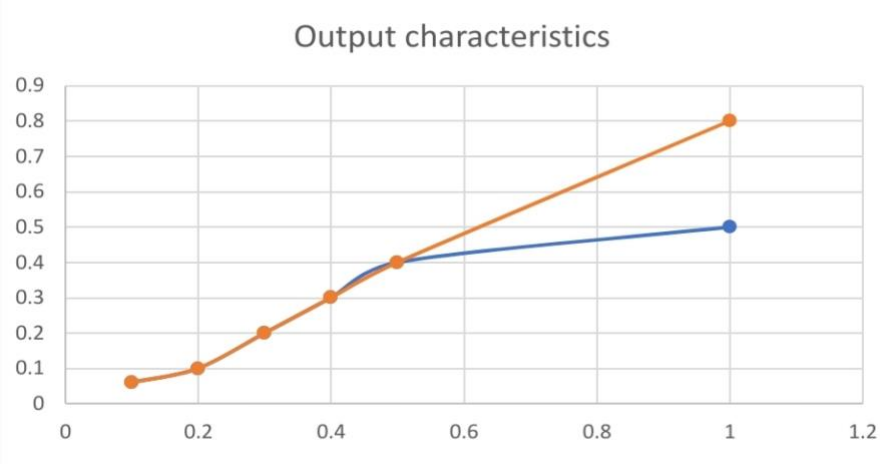
1.Input Characteristics

	V2=1V	V2=10V
V1(V)	Ib(uA)	Ib(uA)
0.7	1.088	1.088
0.77	11.076	11.076
0.795	23.965	20.347
0.81	32.906	27.528
0.815	42.115	30.164
0.825	51.435	35.761



2.Output Characteristics

	Ib=11.076uA	Ib=19.8uA
V2(V)	Ic(mA)	Ic(mA)
0.1	0.06	0.06
0.2	0.1	0.1
0.3	0.2	0.2
0.4	0.3	0.3
0.5	0.4	0.4
1	0.5	0.8



Result: These are Characteristics of Bipolar Junction Transistor for Common Emitter configuration .

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