

Date: 28/4/21

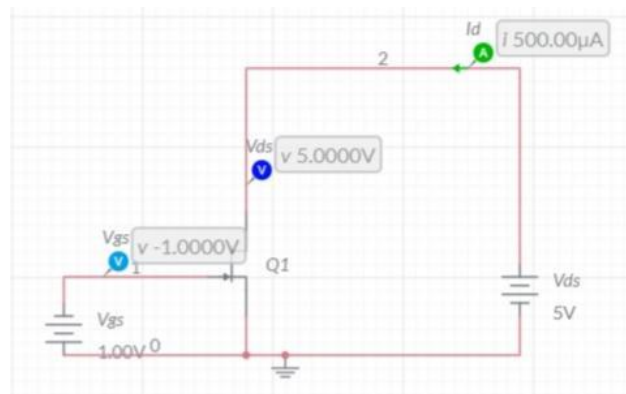
Experiment no. 6

Objective: Study on Transfer and Drain characteristics of Junction field effect transistor

Software used: Multisim Live

Theory: The top of the n-channel is connected to an ohmic contact called as 'Drain' (D) & lower end of Channel is called as 'Source' (S). The two p types of materials are connected together and to the 'Gate' terminal (G).

Circuit diagram:



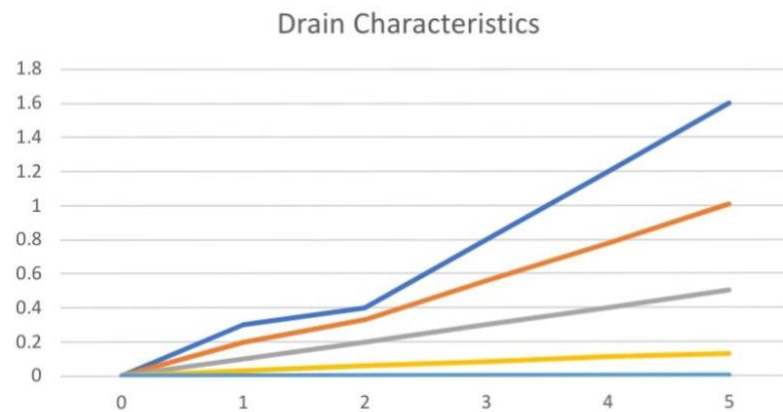
Results & observations:

Observations:

1.Drain Characteristics

	V _{gs} =0V	V _{gs} =-0.5V	V _{gs} =-1V	V _{gs} =-1.5V	V _{gs} =-2V=V _p
V _{ds} (V)	I _d (mA)	I _d (mA)	I _d (mA)	I _d (mA)	I _d (mA)
0	0	0	0	0	0
1	0.3	0.2	0.1	0.03	0
2	0.4	0.33	0.2	0.06	0
3	0.8	0.56	0.3	0.08	0
4	1.2	0.78	0.4	0.11	0

5	1.6	1.01	0.5	0.13	0
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2. Transfer Characteristics

V _{gs} (V)	I _d (mA)
0	1.6
-0.2	1.3
-0.5	1.012
-0.6	0.9
-0.8	0.69
-1	0.5
-1.5	0.13
-2	0



Result: The pinch-off voltage is 2V and these are drain and transfer Characteristics in Junction field effect transistor

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