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MIS : 112003055

BATCH: S4

AIM To understand working principle of LVDT

OBJECTIVES :

1 Study the relation between core displacement and output of LVDT

2.Understand the effect of change in supply frequency on LVDT performance

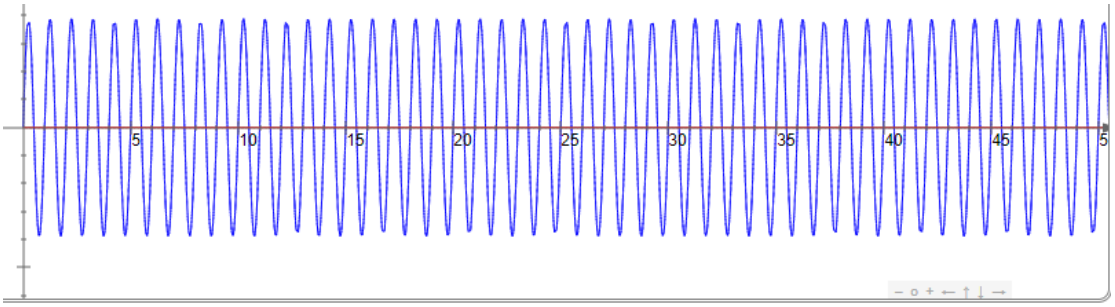
3.Understand the effect of change in excitation (supply) voltage on LVDT performance.

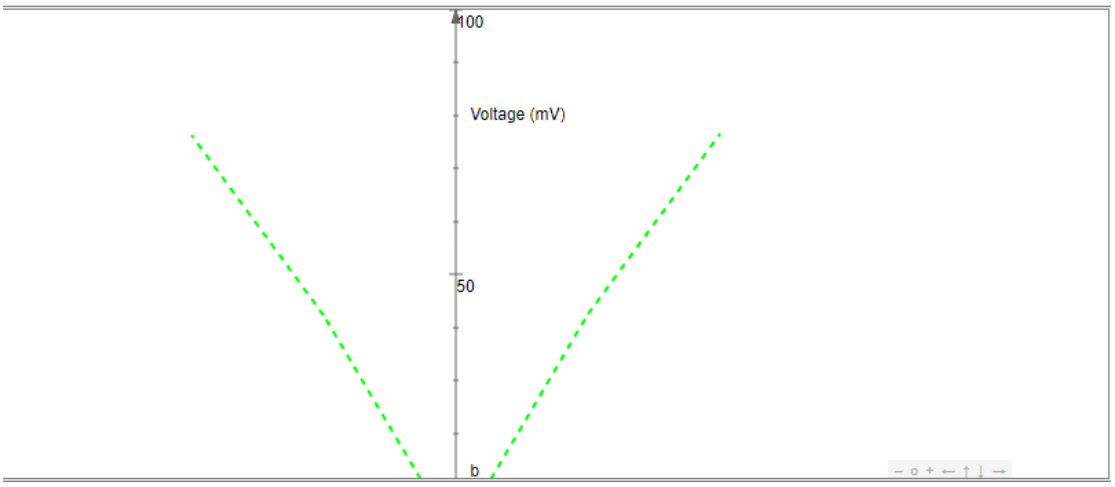
A. Study the relation between core displacement and output of LVDT

FREQUENCY: 1000

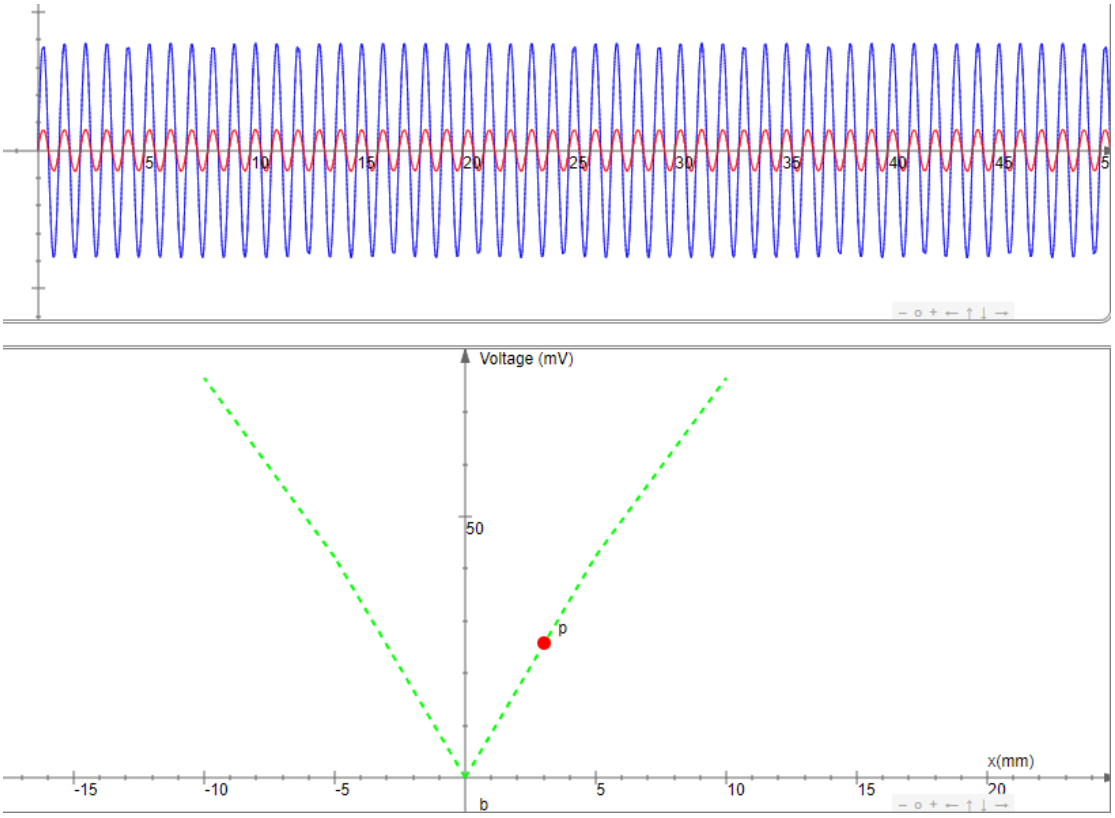
SUPLLY VOLTAGE: 5V

NO OF TURNS: 1000

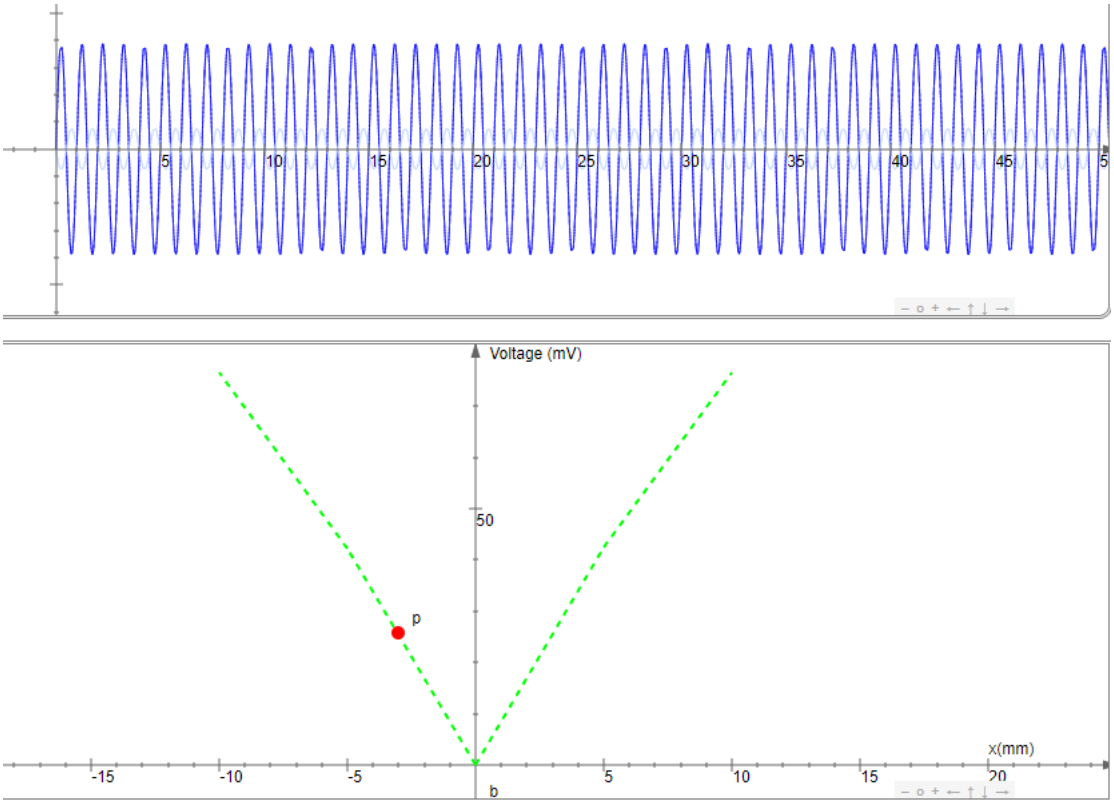




DISPLACEMENT=0mm (AT NULL POSITION)



DISPALCEMENT=3mm

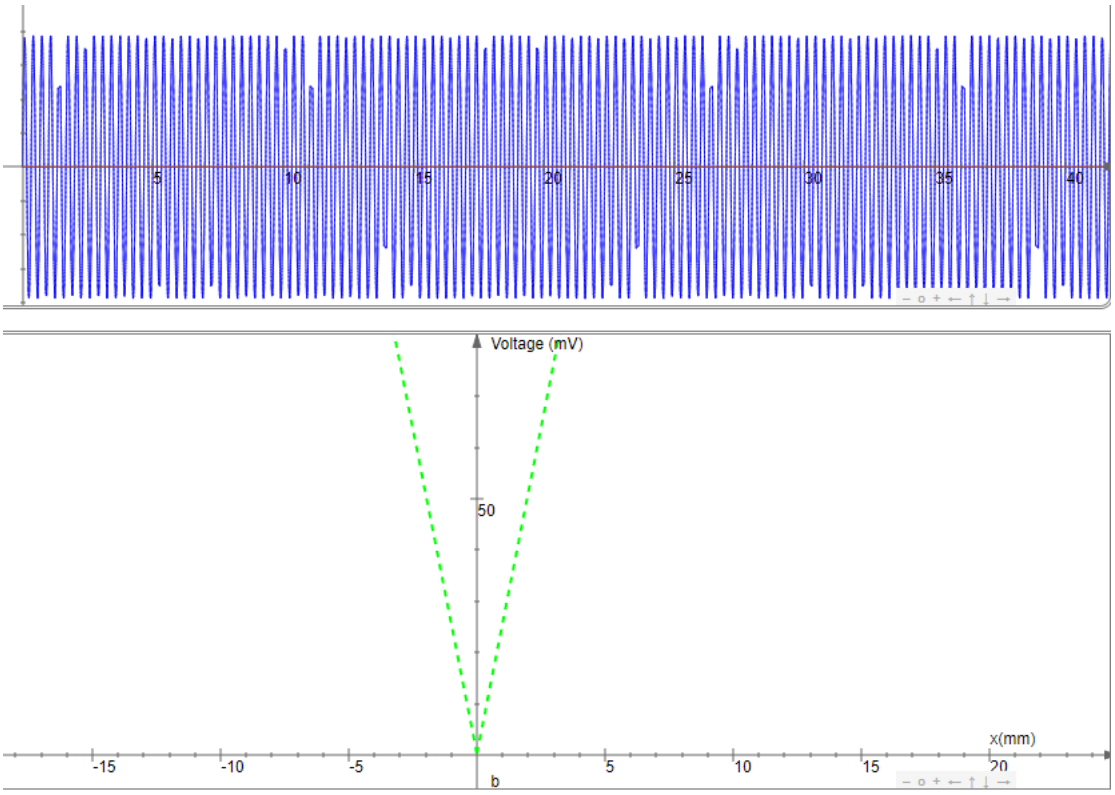


DISPALCEMENT= - 3mm

B.Understand the effect of change in supply frequency on LVDT performance

FREQUENCY: 3000

SUPLLY VOLTAGE: 5V



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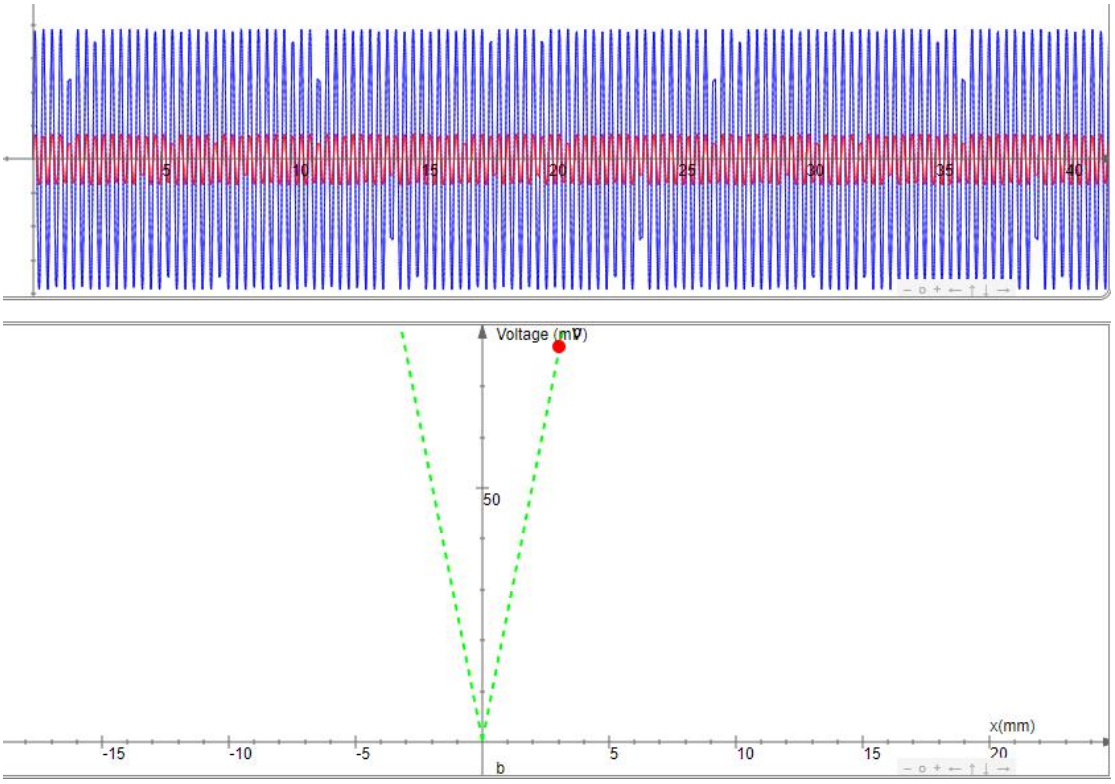
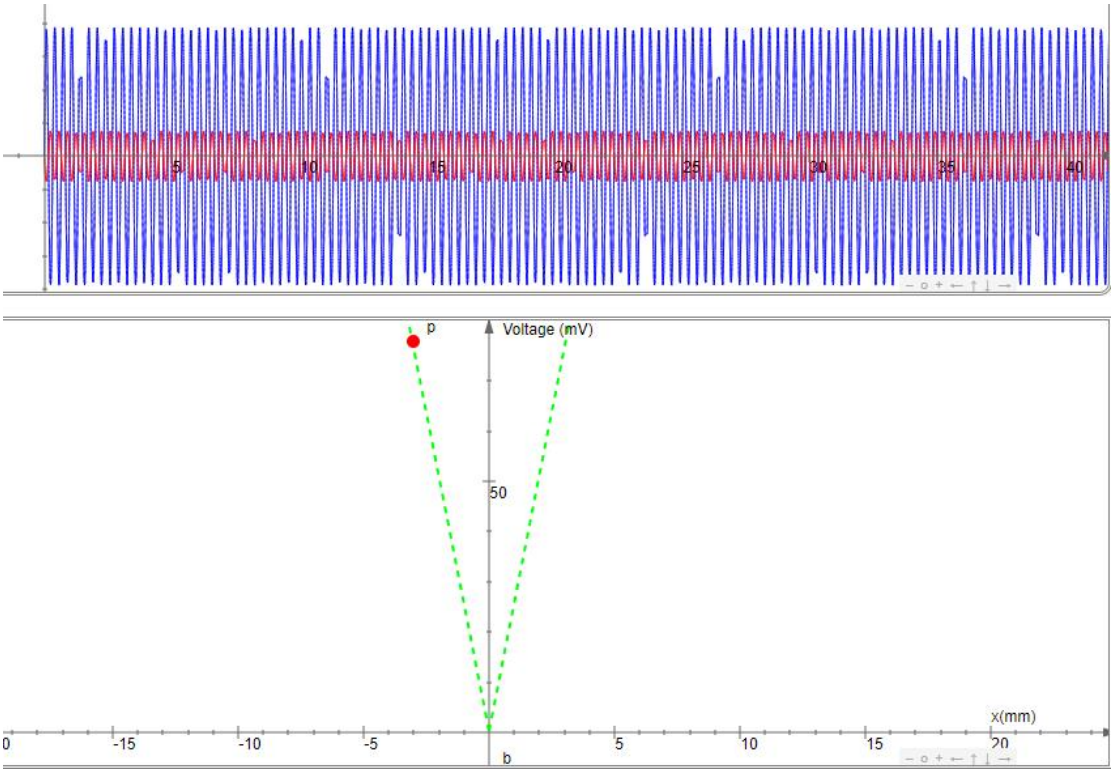


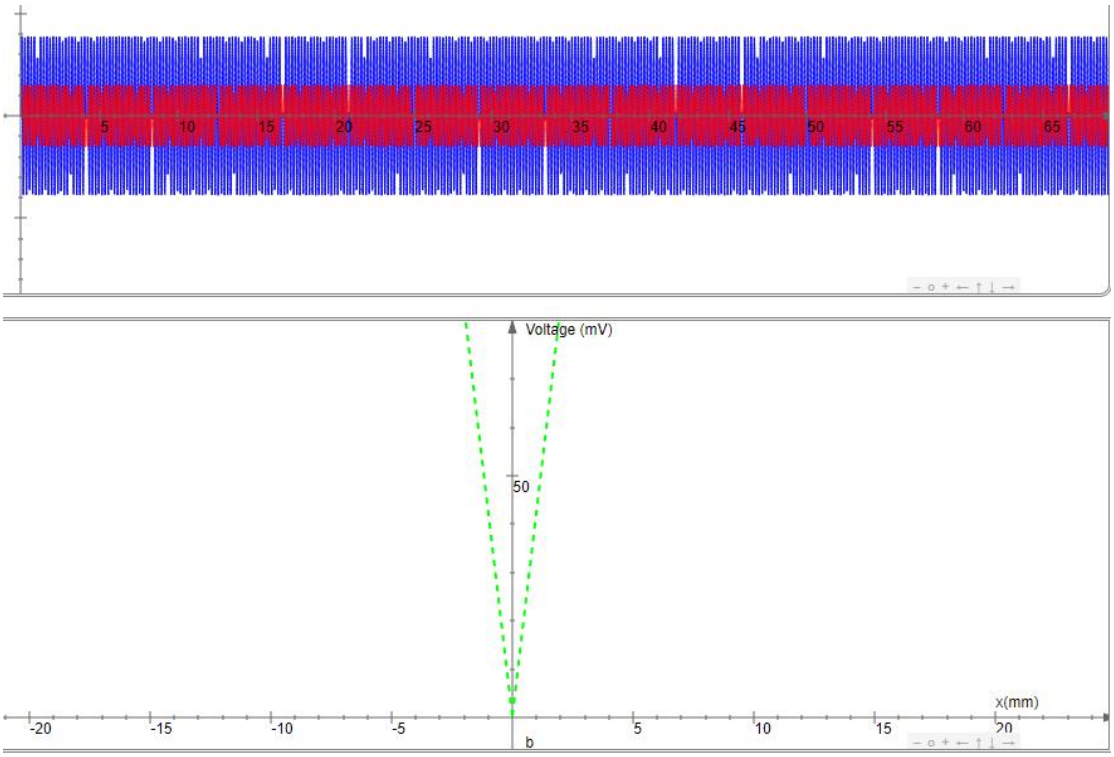
DISPALCEMENT=3mm



DISPALCEMENT= - 3mm

FREQUENCY: 5000

SUPLLY VOLTAGE: 5V



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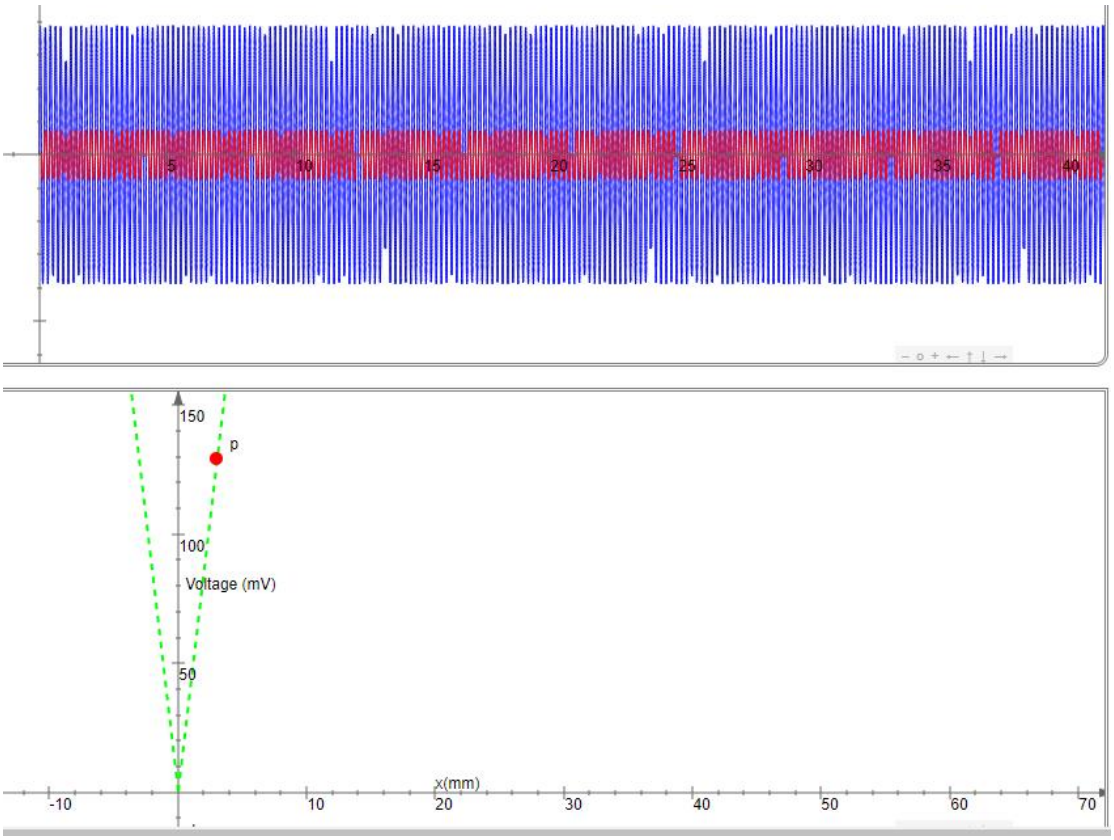
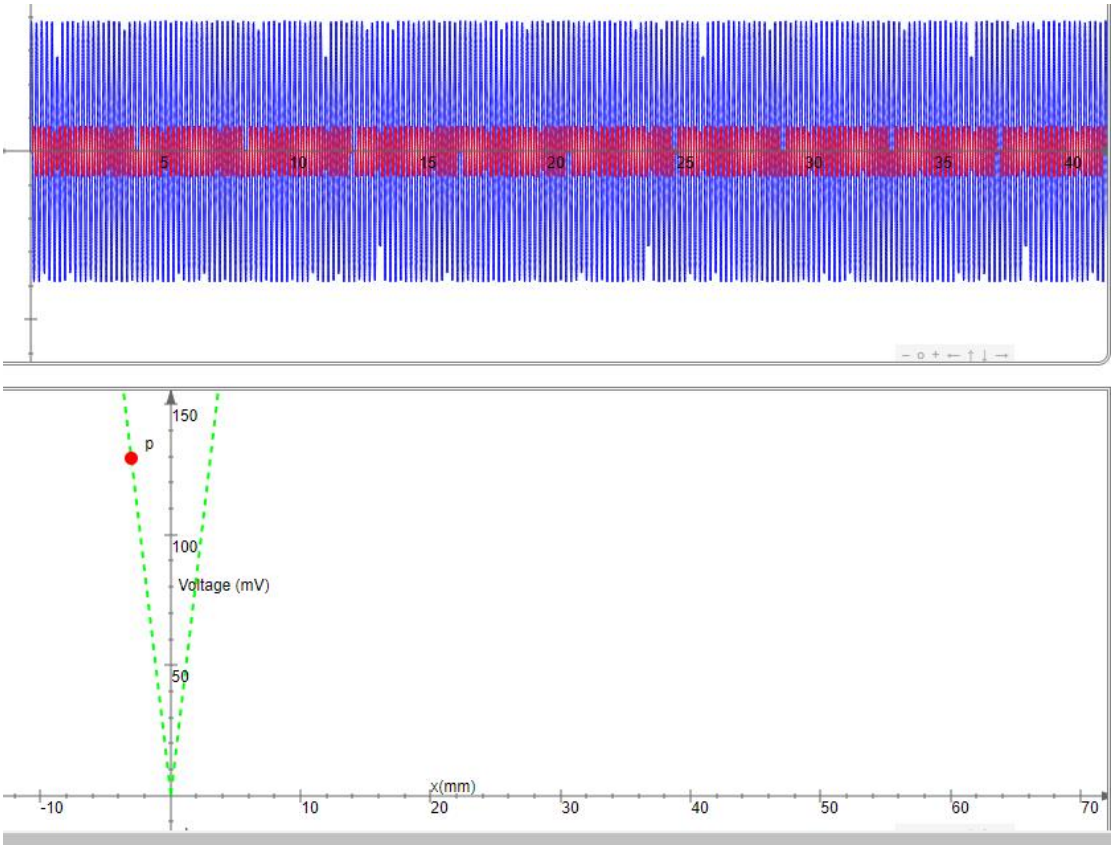


DISPLACEMENT=3mm

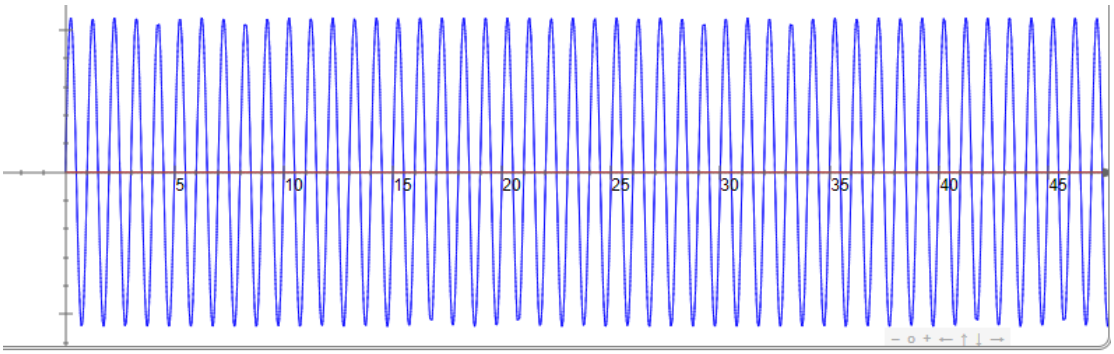


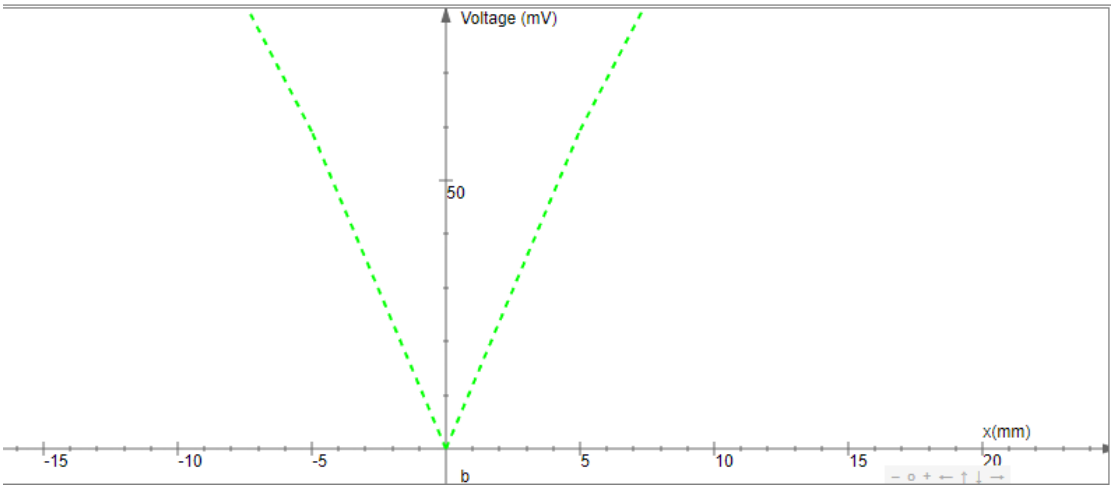
DISPLACEMENT= - 3mm

C.Understand the effect of change in excitation (supply) voltage on LVDT performance.

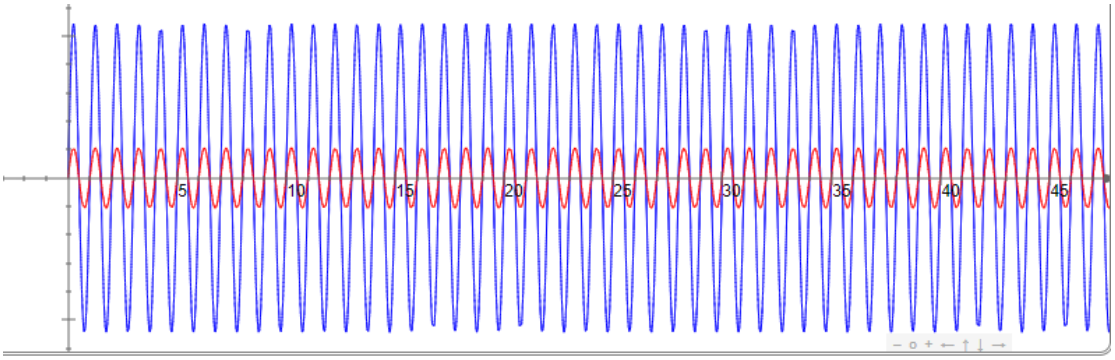
SUPLLY VOLTAGE: 7V

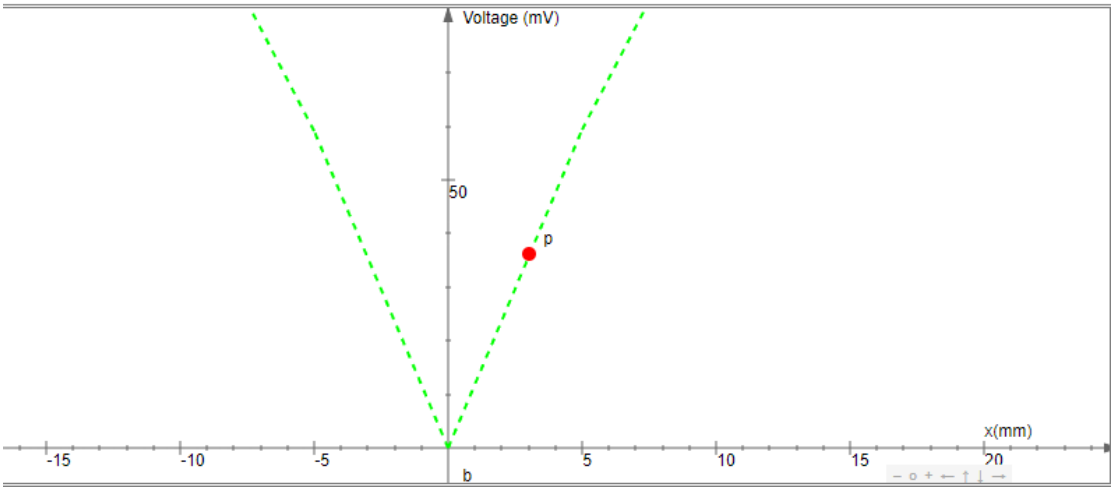
FREQUENCY: 1000



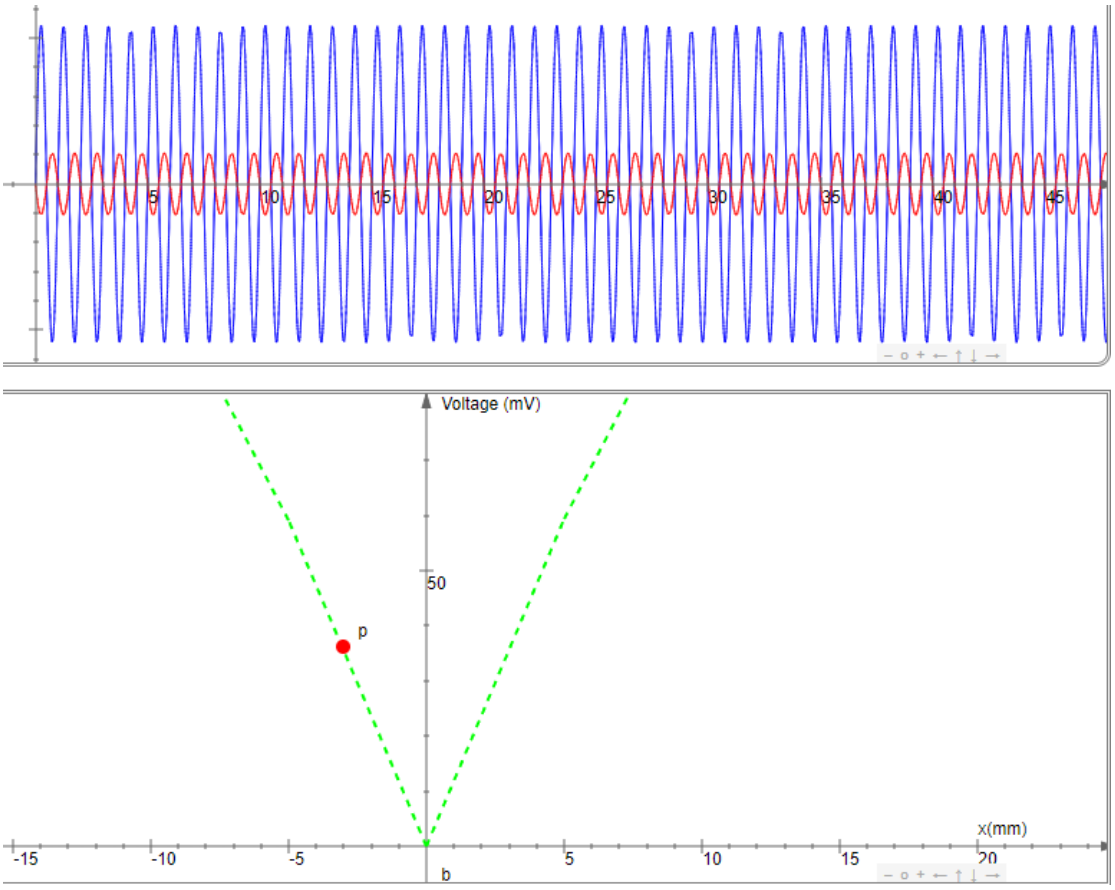


DISPLACEMENT=0mm (AT NULL POSITION)





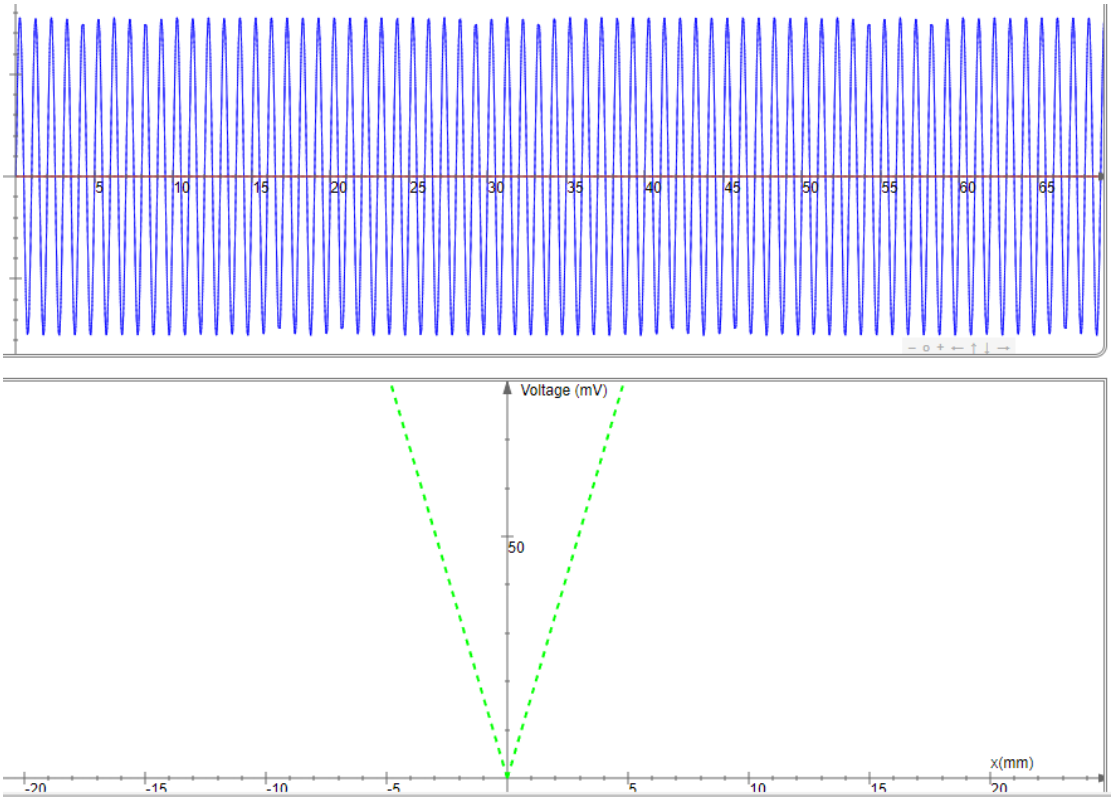
DISPLACEMENT=3mm



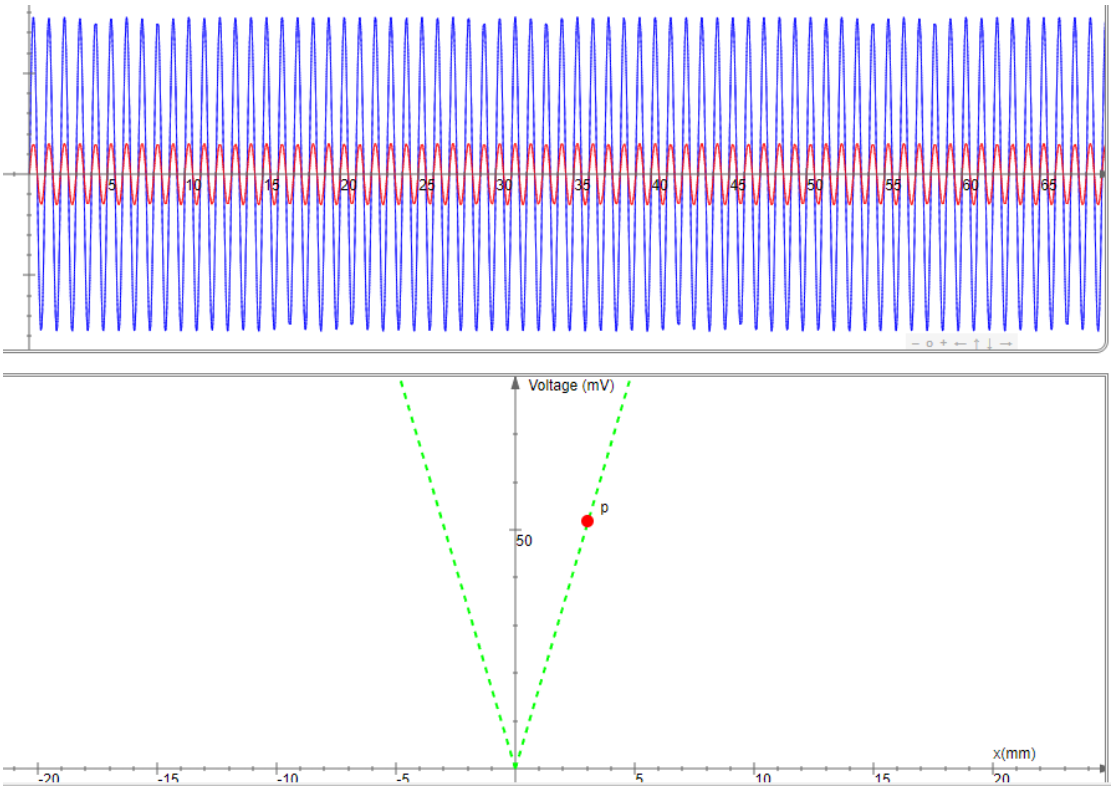
DISPLACEMENT= - 3mm

SUPLLY VOLTAGE: 7V

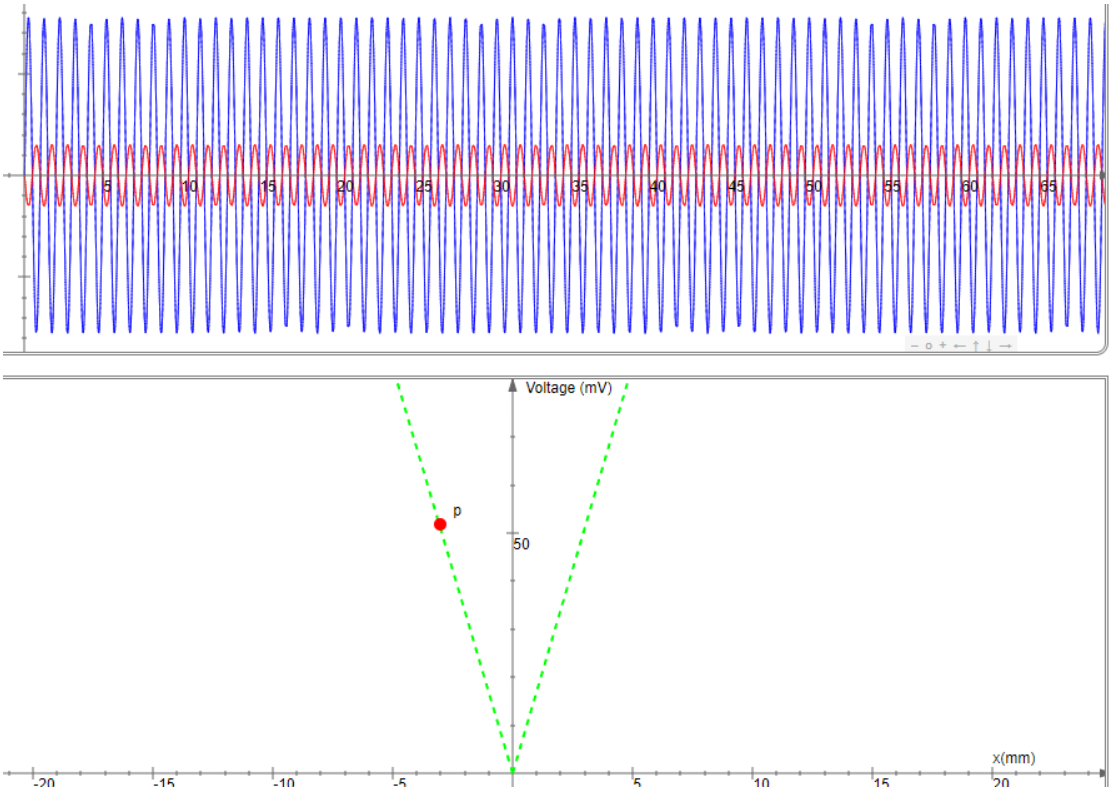
FREQUENCY: 1000



DISPLACEMENT=0mm (AT NULL POSITION)



DISPLACEMENT=3mm



DISPLACEMENT= - 3mm

CONCLUSION:

1.Output of LVDT is proporional to the displacemnt on either side of mean position.

2.Linear behaviour s obsereved when core's displacent is 0 mm.

3.As the displacement increases the behaviour becomes non linear.

4.As the frequency increases output voltage decreses .

5.Output voltage increses as the supply voltage is incresed because of the effect of change in supply voltage.