Measurement and Instrumentation Laboratory (EE3P005)

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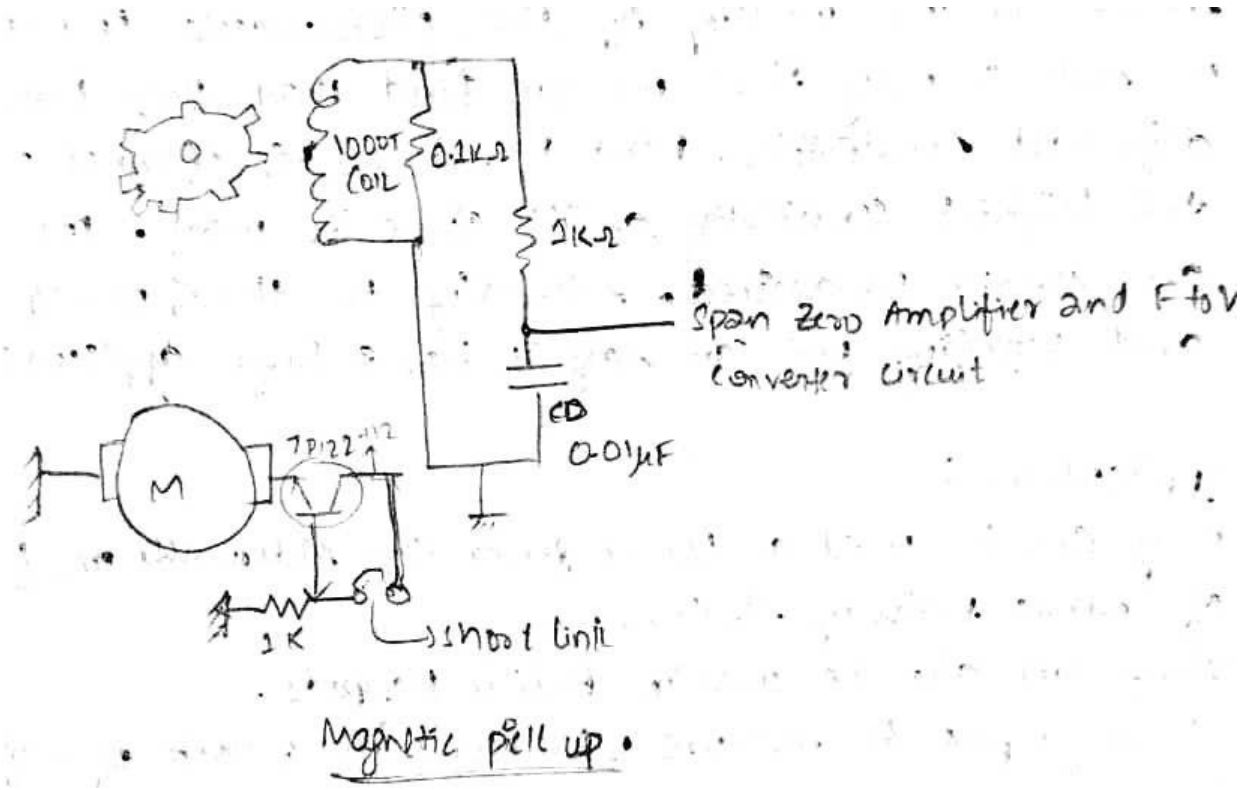
EXPERIMENT 10

AIM OF THE EXPERIMENT:

To study the working of Magnetic pick up and measure speed using Magnetic pick up.

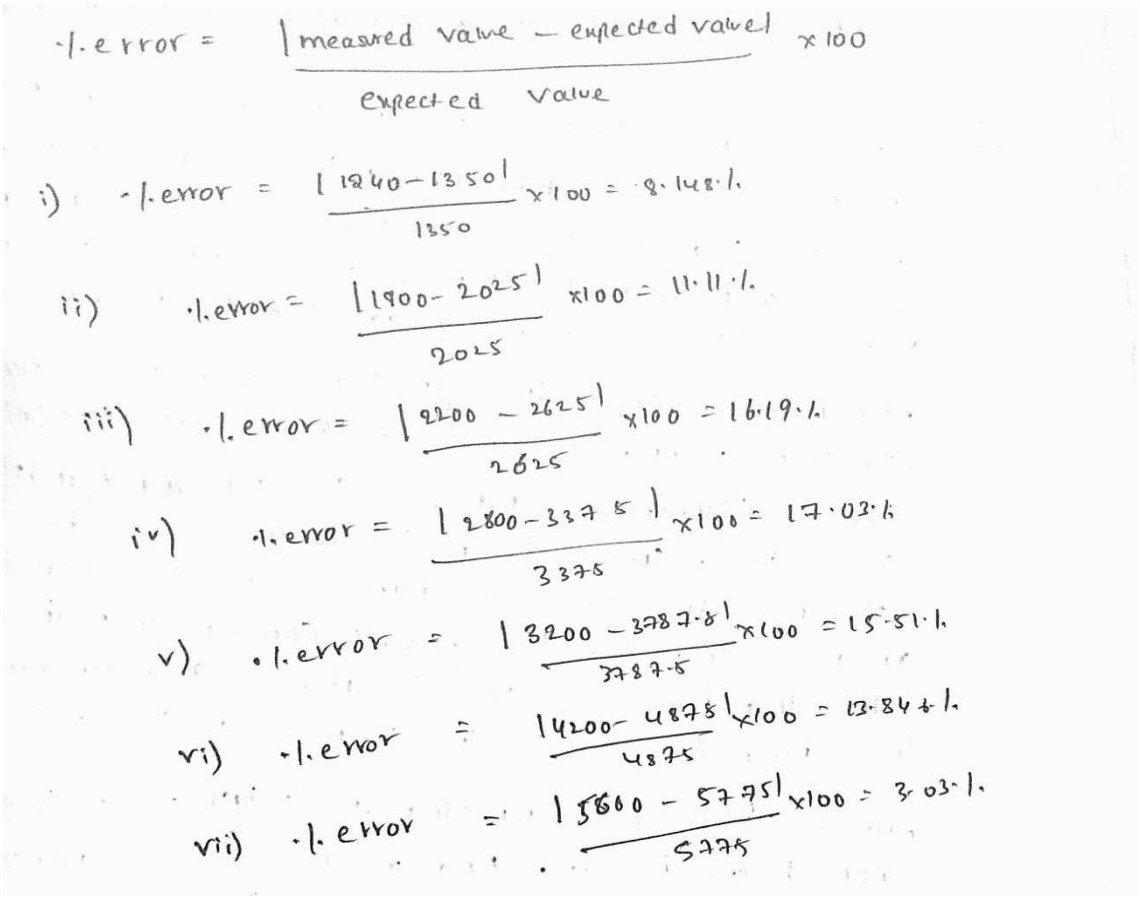
CIRCUIT DIAGRAM:



OBSERVATION TABLE:

Motor Voltage(in V)	Frequency (from CRO)(in Hz)	Speed (in RPM)	Output Voltage(in V)	Speed Observed
3	180	1350	0.62	1240
4	270	2025	0.9	1800
5	350	2625	1.1	2200
6	450	3375	1.4	2800
7	505	3787.5	1.6	3200
9	650	4875	2.1	4200
11	770	5775	2.8	5600

Calculations:



DISCUSSION

1.What is the objective of this experiment?

The objective of this experiment is to study and understand the working of Magnetic pick up and know how to use Magnetic pick up for measuring speed.

Conclusion

Magnetic pickup produces pulses whose rate can be measured to find out the motor speed. Below 600RPM we can have difficulties with inductive magnetic type of pick up because they depend upon rate of change of flux cutting and at slow speed this is very low hence weak voltage is induced.