**REG.NO:**

**SEMBODAI RUKMANI VARATHARAJAN ENGINEERING COLLEGE**

**ACADEMIC YEAR 2014-2015/ODD SEMESTER**

**CYCLE TEST – I AUG-2014**

**DEPARTMENT OF MECHANICAL ENGINEERING**

SET-B

**SUBJECT CODE/TITLE:** **ME 2204 –MECHATRONICS**

**YEAR/SEM:** IV/VII **DATE:**

**DURATION:** 90 Mins **MAX.MARKS:** 50

 **PART-A 5x2=10 Marks**

1. What is hysteresis?

2. State the difference between primary and secondary transducer?

3. What are the factors to be considered for selecting solenoids?

4. What is a stepper motor?

5. List down the feature of JFET.

**PART-B**

6. (a) Explain the working principle of stepper motor in half step mode **(8)**

 (b) Explain thyristors and triacs in detail **(8)**

**(OR)**

7. (a) How will you specify a stepper motor? Explain the general characteristics of a stepper motor **(16)**

8. (a) Explain the static (steady state) characteristics of transducers **(8)**

 (b) Explain the dynamic characteristics of transducers **(8)**

**(OR)**

9. (a) What are the basic elements of a closed loop system? Explain. **(8)**

 (b) Compare open and closed loop system with suitable example. **(8)**

10.a) Explain the following: Thermistors and Piezoelectric sensors **(8)**