

Total No. of Questions : 10]

SEAT No. :

P2883

[4958]-1073

[Total No. of Pages : 2

T.E.(Instrumentation & Control)
CONTROL SYSTEM COMPONENTS
(2012 Coures) (Semester-I) (306263)(End Semester)

Time :2½Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Draw neat sketches wherever necessary.*
- 2) *Answer five questions.*
- 3) *Q1 or 2, Q3 or 4, Q5 or 6, Q 7 or 8, Q 9 or 10.*
- 4) *Assume suitable data.*

Q1) a) Draw and explain the working of a flow switch. **[6]**

b) Compare pneumatic and hydraulic system. **[4]**

OR

Q2) a) Draw and explain the application of an electromechanical relay. **[6]**

b) State the specifications and applications of a contactor. **[4]**

Q3) a) Draw the symbols for selector switch, Temperature switch, pressure switch level switch and flow switch. **[5]**

b) Draw and explain the working of time delay valve in pneumatics. **[5]**

OR

Q4) a) Explain with diagram the concept of inching of a motor. **[5]**

b) Compare an electromechanical relay and a solid state relay. **[5]**

Q5) a) Draw and explain the working of centrifugal and vane pump in hydraulics. **[10]**

b) Draw & explain the working of a pressure reducing valve in hydraulics. **[8]**

OR

Q6) a) Draw & explain the meter- in and meter out-circuit in hydraulics. **[10]**

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b) Draw & explain the hydraulic circuit for controlling a double acting cylinder. [8]

Q7) a) Draw and explain the construction of shaker feeder. [8]

b) Draw & explain the use of low selector for motor speed manipulation. [8]

OR

Q8) a) Draw and explain the working of a circuit breaker in electrical system. [8]

b) Define fuse. Draw and explain construction and working of a HRC fuse. [8]

Q9) a) State the advantages fo fluidics. Draw and explain the bistable amplifier. [8]

b) Draw and explain the explosion proof housing. Give its singificance in industrial systems. [8]

OR

Q10) a) Define hazardous area Give hazardous area classification in detail. [8]

b) State the types intrinsic safety barrier. Explain any one type. [8]

