

Duration: 03 Hours.

Total marks assigned to the paper: 80



- N.B. : (1) Question No.1 is compulsory  
(2) Attempt any **three** questions from remaining five questions.  
(3) Draw neat diagrams wherever required.  
(4) Assume suitable data if required.

- Q.1 Explain any **Four** 20  
a) Describe working of solenoid valve.  
b) Write a short note on RFID and its applications  
c) Distinguish between pneumatics, hydraulics and electrical systems  
d) Distinguish between 2-wire and 4-wire transmitter  
e) What is time delay valve
- Q.2 a) Draw and explain hydraulic actuator speed control circuits in short 10  
b) Draw and explain types of compressors with their application 10
- Q.3 a) Write a short note on SMART transmitters with one application 10  
b) Explain working of safety valve, relief valve and rupture disc 10
- Q.4 a) How I to P convertor works and mention its significance in industry 10  
b) Draw and explain flapper nozzle mechanism 10
- Q.5 a) Write note on linear actuators and explain single acting and double acting cylinder 10  
b) What is a control valve? State the principle of operation and mention its types. 10
- Q.6 a) What is valve positioner? Explain it with help of a diagram 10  
b) Write a short note of air distribution system. 10