

Process Instrumentation & Control Engineering

Assignment-1

1. With a neat diagram explain the construction and working principle of ionization type of pressure transducer. Also mention its advantages and disadvantages.
2. With a neat diagram explain the construction and working principle of ionization type of piezo-electric type pressure transducer. Also mention its advantages and disadvantages.
3. Which one of the following devices can not used to measure pressure?
a) strain gauge b) LVDT c) Piezoelectric crystal d) Pyrometer
4. Which of the following additional is required for measuring pressure with piezoelectric crystal?
a) Bellows b) Strain gauges c) Rotameter d) RTD
5. The device used for measuring low pressure of the order of 10^{-2} torr, is
a) Strain gauge b) Pirani gauge c) Ionisation gauge d) any of these
6. Thermal conductivity gauge is used for measuring a) high pressure b) low pressure c) both d) none.
7. A load cell is an electro-mechanical device and widely used for measurement of a) static force b) dynamic force c) temperature d) both a) and b)
8. Pirani gauge is used for measurement of pressure ranging from a) 10^{-4} to 1 torr b) 1 to 10 torr
c) 10 to 100 torr d) above 100 torr.
9. The ionization vacuum gauge, in construction, is similar to a
a) vacuum diode b) vacuum triode c) thyratron d) none
10. In calibrating a pressure instrument, we first adjust its-
a) span b) zero c) linearity d) output
11. The difference between gauge and absolute pressure is –
a) a vacuum b) 0.433 psia c) atmospheric pressure d) zero
12. Diaphragms used in pressure application are-
a) light b) small in size c) slack d) bimetallic
13. What type of manometer is best for measuring low pressure?
a) well b) inclined c) U-tube d) multiple tube
14. Another name of servo pressure transducer is _____ pressure transducer.
15. Piezoelectric transducer can not measure _____ pressure.