BE Semester-__V_(Electrical) Question Bank

(Industrial Instrumentation)

All questions carry equal marks(10 marks)

Q.1	Describe Static and dynamic characteristics of an Instrumentation system.
Q.2	Discuss classification and principle of transducers in detail.
Q.3	With neat sketch explain construction and working of LVDT in detail.
Q.4	Draw output characteristics of LVDT. Discuss its merits and demerits.
Q.5	Explain temperature compensation in strain gauge using dummy guage.
Q.6	Define and explain terms: (1) Hysteresis (2) Reproducibility (3) Resolution (4) Accuracy (5) Dead zone.
Q.7	Define and explain terms: (1) Drift (2) Sensitivity (3) Gauge pressure (4) Absolute pressure (5) Static pressure.
Q.8	Explain working of hall effect transducer in detail.
Q.9	Discuss applications of Hall effect transducer in detail.
Q.10	State different types of torque measurement techniques and explain any one in detail.
Q.11	Write detailed technical note on : Hydraulic load cell.
Q.12	What is load cell? Explain proving ring and hydraulic load cell.
Q.13	Explain measurement of vacuum pressure using pirani gauge.
Q.14	With neat sketch explain construction and working of Rota meter.
Q.15	Explain working of ultrasonic level detectors.
Q.16	Explain flow measurement technique using hot wire anemometer.
Q.17	Describe construction and working principle of Thermocouples.
Q.18	Explain Resistance Temperature Detector (R.T.D.)
Q.19	Discuss merits and demerits of R.T.D.
Q.20	Explain construction and working of optical pyrometer.
Q.21	Draw a generalised diagram of digital data acquisition system and explain each component in detail.
Q.22	Discuss essential functional operations of digital data acquisition system.
Q.23	Write technical note on Shaft encoders.
Q.24	Explain Piezo electric transducer in detail.
Q.25	Discuss applications of strain gauges.
Q.26	Discuss temperature compensation.
Q.27	What are various types of resistive potentiometers? Explain.
Q.28	Explain digital recorder.
Q.29	Explain various humidity and moisture measurement techniques in brief.
Q.30	Write technical note on Infrared guns.
Q.31	Explain indicating, recording and controlling instruments with suitable examples.
Q.32	Explain operation of sample hold circuits with neat diagram.
Q.33	Discuss the importance of A/D and D/A circuits in digital data acquisition system.
Q.34	Explain different methods for level measurement. Explain any one of them.
Q.35	Write a detailed technical note on Thermocouple.
Q.36	Explain in detail Bubbler method.
Q.37	Explain ventury tube and its application.

Q.38	Write note on Turbine flow meter.
Q.39	Discuss application of hot wire anemometer.
Q.40	Write technical note on Pressure gauge calibration.