

GUJARAT UNIVERSITY

BE Semester-VI (Instrumentation & Control) Question Bank-2013

SUBJECT NAME: Instrumentation System (IC 603)

All questions carry equal marks (10 marks)

| | |
|------|---|
| Q.1 | Explain Static Characteristic of System in Brief. |
| Q.2 | Explain Dynamic Characteristic of System in Brief. |
| Q.3 | Explain Process flow sheet with help of suitable diagram |
| Q.4 | Explain instrument specification sheet with help of example. |
| Q.5 | Draw and Explain Electronic Loop Wiring Diagram |
| Q.6 | Distinguish between process flow sheet and mechanical flow sheet regarding documentation under instrument project control. |
| Q.7 | Justify the importance of P&I diagram and Instrument specification sheets. |
| Q.8 | What are the Factors & Specification required for Panel Drawing. |
| Q.9 | List out Installation Procedure of Instrumentation Systems |
| Q.10 | What do you mean by plant Start up? Explain the plant start up procedure |
| Q.11 | Explain Temperature Transmitter Check Out Procedure |
| Q.12 | Explain Flow Transmitter Check Out Procedure |
| Q.13 | Explain Control Valve Check Out Procedure |
| Q.14 | Explain three types of electrical power supply systems for the instrument panel, used in control room. |
| Q.15 | Describe control panel types |
| Q.16 | Brief about the function of Alarm Annunciator. Explain Sequence of Alarm Annunciator. |
| Q.17 | Explain the Types of Annunciator |
| Q.18 | Discuss various control room layout criteria's we consider for design control room for gas based power plant industry |
| Q.19 | Give the various communications systems used in plant control room. Explain any two in details with its features. |
| Q.20 | Describe Specification required for Panel Bid. |
| Q.21 | Define the following terminology used in Instrumentation System 1) Instrumentation Air 2) Plant Air |
| Q.22 | What is need of compressor in Instrumentation Air System? Explain various control used in compressor of Instrumentation Air System. |
| Q.23 | Explain the classification of compressors used for Instrument Air Supply and explain any one type in detail |
| Q.24 | Explain the necessity & Design Guideline of dryers for Instrument Air System. |
| Q.25 | Explain Desiccant Type Dryer in Brief |
| Q.26 | Explain Refrigeration Type Dryer in Brief |
| Q.27 | Describe Takeoff & Valving term for Instrument Air System |
| Q.28 | Explain Air Distribution System |

| | |
|------|--|
| Q.29 | Explain a) air filter regulators b) air quality requirement and energy saving in compressed air systems. |
| Q.30 | Explain Intrinsic safety. Discuss it's advantages and drawbacks |
| Q.31 | State personal safety and energy levels for electrical hazardous. |
| Q.32 | Classification of Hazardous location |
| Q.33 | Write Short Note on Smoke detectors |
| Q.34 | Explain Flame failure detector |
| Q.35 | Write Short Note on Pressure relief valves |
| Q.36 | Write Short Note on Rupture disk |
| Q.37 | Explain Strip chart recorder with neat sketch. |
| Q.38 | Differentiate Analog and Digital indicator. |
| Q.39 | Magnetic Type Recorder |
| Q.40 | Draw ISA Symbol: 1) Reboiler 2) Three-Way Valve, Fail to open 3) Duct 4) Diaphragm spring opposed actuator with Positioner 5) Pressure relief valve 6) Ball valve 7) Water cooled condenser 8) Check valve 9) Capillary tube 10) Desiccant Dryer |