

Enrolment No. _____

- | | | |
|-----|---|----|
| Q.1 | (a) Explain with neat diagram, Large air instrumentation system. | 07 |
| | (b) Explain types of control panels with necessary diagram. | 07 |
| Q.2 | (a) Explain the significance of documentation in project control. | 07 |
| | (b) For a thermocouple type temperature transducer and pneumatic controller and transmitter, draw PI diagram using ISA symbols. | 04 |
| | (c) Draw ISA symbols for | 03 |
| | 1) Safety valve | |
| | 2) Damper | |
| | 3) Pressure relief valve | |
| | OR (in place of b and c) | |
| | (b) Explain with necessary diagram heat reactivated dryer. Also explain the type and importance of dryers. | 07 |
| Q.3 | (a) Explain calibration procedure of master instruments. | 07 |
| | (b) Explain in detail, classification as per National Electric Code (NEC). | 07 |
| | OR | |
| Q.3 | (a) Explain in detail filled-in systems for temperature measurement. | 07 |
| | (b) Explain design guidelines for flow measurement. | 07 |
| Q.4 | (a) Compare Electronic and pneumatic systems with example. | 07 |
| | (b) Explain different measuring instruments for level measurement with advantages / disadvantages of each. | 07 |
| | OR | |
| Q.4 | (a) Explain in details with necessary equations, control valve sizing. | 07 |
| | (b) Explain the role and importance and nature of duties to be performed by Project Manager. | 07 |
| Q.5 | (a) Explain with necessary examples, the valve selection for different applications. | 07 |
| | (b) Compare with advantages/disadvantages flat face and back front control panels. | 07 |
| | OR | |
| Q.5 | (a) Explain different type of compressor with neat sketches. | 07 |
| | (b) Explain intrinsic safety in detail. | 07 |