TE/ELX/Sem-VII/CBGS/ Sub-AIS / 29/11/2016

Q. P. Code : 591704

(3 Hours) **[Total Marks : 80]**

Note : (1) Question No.1 is compulsory.
(2) Attempt any three questions from remaining five questions.
(3) Assume suitable data if necessary.
(4) Figure to the right indicate full marks.

1. Explain in brief
a) Integral controller **05**
b) Electronic type temperature transmitter **05**
c) Pneumatic logic gates **05**
d) Data logger **05**

2. (a) Explain loading of valves in pump application with diagram. **10**
(b) Explain control valve characteristics. The temperature has a range of 300 K to 440 K and a setpoint of 384 K. Find the% span error when the temperature is 379 K. **10**

3. (a) What is the necessity of valve positioner? Give the details about the force balance and motion balance valve positioners. **10**
(b) Explain detail cylinder of construction with its dynamics. **10**

4. (a) What are the different types of hydraulic pumps? Explain with neat sketch. **10**
(b) Explain the installation procedure of control valve. **10**

5. a) Explain the need of controller tuning. What are the different methods of controller tuning? **10**
(b) Explain compressed air receiver unit. What are the different control strategies for air receiver unit? **10**

6. a) Compare conventional and smart transmitters. Explain the working of DP transmitter. **10**
(b) Write short note on: a) Telemetry b) I-P converter. **10**

****

muquestionpapers.com