

TE (Electronics)
Sem VI (CBGS)

Advance Instrumentation Systems

QP Code : 591702

16-05-2016

(3 Hours)

[Total Marks : 80

- N.B.**
- (1) Question No.1 is **compulsory**.
 - (2) Attempt any three questions from remaining five questions.
 - (3) Assume suitable data if necessary.
 - (4) Figures to the right indicate full marks.

1. (a) With neat block diagram, explain the working of multichannel data acquisition system. 10
(b) Why converters are required? Explain electrical to pneumatic converter. 10
2. (a) Draw and explain single and double acting actuators. 10
(b) Explain the installation procedure of control valve. 10
3. (a) Explain the working of smart transmitters. Highlight the features of smart transmitter. 10
(b) With neat diagram, explain the cascade of PID controller. 10
4. (a) Compare electrical, pneumatic and hydraulic actuators. 10
(b) Draw and explain inherent and installed characteristics of control valves. 10
5. (a) With neat diagram, explain the instrument air system. 10
(b) Explain the working of electronic DP transmitter. 10
6. (a) Explain process reaction curve method and ZN method of PID tuning. 10
(b) With neat diagram, explain speed control circuit for hydraulic actuator. 10
