B.E.(with Credits)-Regular-Semester 2012-Instrumentation Engineering Sem VII

IN - Advanced Process Instrumentation

P. Pages : 1 **GUG/W/16/6612**

Time : Three Hours * 4 6 5 2 * Max. Marks : 80

Notes : 1. All questions carry equal marks as indicated.
2. Due credit will be given to neatness and adequate dimensions.
3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain need of acquisition of data. Also explain applications of DAS. **8**

b) Draw and explain functional block diagram of computer control system. **8**

OR

2. a) What is SCADA. Explain application of SCADA in different industries. **8**

b) Write a short note on Direct Digital Control. **8**

3. a) Explain OSI reference model with neat diagram. **8**

b) Write a short note on Profibus. **8**

OR

4. a) Explain criteria's to select network list different networks. **8**

b) Explain foundation fieldbus. **8**

5. a) Write a brief about process safety. **8**

b) Explain in short safety integrity level. **8**

OR

6. Write a short note on **any two.** **16**

i) Hazard and operability study (HaZop). ii) Applications of safety system.
iii) IEC 61511.

7. a) Explain in detail SLPC. **10**

b) Compare in between SLPC and MLPC. **6**

OR

8. a) Explain PID controller for flow control in detail. **10**

b) Write in short applications of MLPC. **6**

9. Explain in detail design aspects and process of **any one.** **16**

i) Boiler. ii) Heat Exchanger.

OR

10. Explain in detail process flow diagram of **any one.** **16**

i) Distillation column. ii) Evaporator.

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