

Total No. of Questions : 6]

SEAT No. :

P4894

[Total No. of Pages : 2

B.E./Insem. - 28
B.E. (Electrical)
PLC and SCADA Applications
(2012 Pattern) (Semester - I)

Time :1Hour]

[Max. Marks :30

Instructions to the candidates:-

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right indicate full marks.*

- Q1)** a) List & discuss the advantages & disadvantages of PLC. [8]
b) Define Programmable Logic Controller. [2]

OR

- Q2)** a) Explain the operation of Input Module. [6]
b) Explain the PLC power supply. [4]

- Q3)** a) Explain on delay timer in detail along with its timing diagram. [6]
b) Explain MCR (master control relay) and control zones? [4]

OR

- Q4)** a) Explain various types of switches with their symbols. [5]
b) Draw the ladder diagram for the following function table. [5]

Inputs - I1, I2 Outputs - Q1, Q2, Q3, Q4

I1	I2	Q1	Q2	Q3	Q4
0	0	1	1	1	0
0	1	0	1	1	1
1	0	1	0	1	1
1	1	1	1	0	1

- Q5)** a) Explain input analog devices. [6]
b) Explain PID controller. [4]

P.T.O.

OR

- Q6)** a) Explain output ON/OFF devices. [4]
b) What is tuning of PID. Explain different methods of tuning. [6]

