Total No. of Questions :6]

SEAT No. :

P5157

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B.E./Insem.-562
B.E.(Electrical) (Semester - I)
PLC AND SCADA APPLICATIONS
(2012 Pattern)

Time : 1 Hour] *[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) What are different benefits of automation in industry? **[5]**

b) Explain different types of PLC. **[5]**

OR

Q2) a) Draw and explain overall PLC block diagram. **[8]**

b) What are different selection criteria for PLC? **[2]**

Q3) a) Explain various rules for construction of ladder diagram. **[6]**

b) Draw and explain electromagnetic relay. **[4]**

OR

Q4) a) Explain up counter in detail with its related bits and timing diagram. **[6]**

b) Draw the ladder diagram for the following function table. **[4]**

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

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

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Q5) a) List Output Analog devices. Explain any one example in detail. **[6]**

b) What are different input ON/OFF devices? **[4]**

OR

Q6) a) What is the effect of change of Kp on the output of the system? Explain with response curves. **[6]**

b) What is the effect of change in integral constant (Ki) and derivative constant (Kd) on the performance of the system. **[4]**

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