Total No. of Questions :6]

SEAT No. :

P217

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Oct./ BE/ Insem. - 533

B.E. (Electrical)

PLC AND SCADA APPLICATIONS

(2015 Course) (Semester - I) (403142)

Time : 1 Hour] *[Max. Marks :30*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***

Q1) a) List & discuss the advantages & disadvantages of Programmable Logic Controller. **[8]**

b) Which are various selection criteria for PLC? **[2]**

OR

Q2) a) Explain the types and the function of programmer and monitors. **[5]**

b) Explain input and output modules in PLC. **[5]**

Q3) a) Explain various output ON/OFF devices. **[5]**

b) Explain linear variable differential transformer (LVDT) with proper diagram. **[5]**

OR

Q4) a) What are different types of actuators? Explain any one of them in detail. **[5]**

b) Write a short note on encoders explaining its types. **[5]**

P.T.O.

Q5) a) Draw explain ladder diagram for OFF delay timer along with its bits. Also draw its timing diagram. **[8]**

b) State some applications using timers in PLC. **[2]**

OR

Q6) a) What is Master control relay (MCR)? **[3]**

b) Develop the ladder diagram for the combination of Timer and Counter for lamp ON/OFF operation. Generate a delay of 50 sec using Timer (TON) for 5 sec along with the counter (UP counter) for 10 counts. (5 sec X 10 counts = 50 sec). The lamp should be ON after a delay of 50 sec. **[7]**