

Total No. of Questions : 6]

SEAT No. :

P5796

[Total No. of Pages : 1

**BE/Insem/Oct.-559**  
**B.E. (Electrical)**  
**PLC and SCADA Applications**  
**(2015 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) With a neat block diagram explain overall system of PLC. [7]  
b) Define programmable logic controller as per NEEMA. [3]

OR

- Q2)** a) What are various benefits of automation? [6]  
b) State and explain various applications of PLC. [4]

- Q3)** a) Explain various input analog devices. [6]  
b) Draw and explain electromechanical relay. [4]

OR

- Q4)** a) Write a short note on proximity sensors explaining its types. [5]  
b) What are different types of control elements? Explain any one of them in detail. [5]

- Q5)** a) Explain various rules for development of ladder diagram. [8]  
b) Explain RESET instruction. [2]

OR

- Q6)** a) Explain control zone relay. [3]  
b) Draw ladder diagram for traffic light controller using three different timers. [7]

