

Total No. of Questions : 8]

P3307

SEAT No. :

[Total No. of Pages : 2

[5670] 576

B.E. (Electrical)

PLC AND SCADA APPLICATIONS

(2015 Pattern) (End Sem.)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Assume suitable data, if necessary.*

- Q1)** a) Draw & explain overall PLC system. [7]
b) Explain input analog devices. [7]
c) Explain retentive timer in detail. [8]

OR

- Q2)** a) State advantages and disadvantages of PLC. [8]
b) Explain level measurement by using level sensor. [7]
c) Draw the ladder diagram for traffic light controller. [7]

- Q3)** a) Explain the effect of change of integral gain K_i & derivative gain K_d of PID controller on response of system. [8]
b) Explain Adjust & Observe method of PID Tuning. [8]

OR

- Q4)** a) Explain AC motor overload protection. [8]
b) Explain speed control of DC motor using PLC. [8]

- Q5)** a) Draw and explain SCADA architecture in details. [8]
b) State advantages & disadvantages of SCADA system. [8]

OR

P.T.O.

Q6) a) Explain application of SCADA system in Automatic Substation Control. [8]

b) State the desirable properties of SCADA system. [8]

Q7) a) Draw & explain OSI model. [8]

b) Write a short note on TCP/IP protocol. [8]

OR

Q8) a) Write a short note on Profibus. [8]

b) Write a short note on Flexible Function Block process (FFB). [8]

