

B.TECH. SEM -VI ELECTRICAL 2014 COURSE (CBCS) :
WINTER - 2017
SUBJECT : ELECTIVE – II: PROGRAMMABLE LOGIC CONTROLLERS

Day : **Friday**
Date : **24/11/2017**

W-2017-2206

Time : **10.00 AM TO 01.00 PM**
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

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- Q.1** a) Draw and explain block diagram of CPU. [05]
b) What are advantages of PLC? [05]

OR

- a) What are five microprocessors used in PLC CPUs? [05]
b) Which microprocessor is least powerful and which one is most powerful and why? [05]

- Q.2** a) What are basic components of ladder diagram? Draw necessary symbols. [05]
b) What are different programming equipments? Explain in brief. [05]

OR

- a) How do you differentiate open loop system and closed loop system? [05]
b) What do you mean by PID controller in case of PLC? [05]

- Q.3** a) How do you co-related operation of AC motor starter with PLC? [05]
b) What do you mean by DC motor controller? [05]

OR

- a) What are properties of relay logic system with respect to PLC system? [05]
b) What are different advanced PLC functions? [05]

- Q.4** a) What are desirable properties of SCADA system? [05]
b) What do you mean by SCADA architecture? [05]

OR

- a) How do you explain integration of PLC and SCADA [05]
b) What are problems associated with SCADA system. [05]

- Q.5** a) What are different types of architectures in relation with SCADA? [05]
b) How do you explain about HMI in relation with SCADA? [05]

OR

- a) What do you mean by Automatic substation control? [05]
b) What is role of Remote terminal unit in case of hazardous environments? [05]

- Q.6** How do you explain overview of open systems interconnection (OSI) model? [10]

OR

- What are different functions of OSI model layers? [10]

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