VII Semester B.E. (E & E) Degree Examination, June/July 2017
(2K11 Scheme)
EE – 706.4 : PROGRAMMABLE LOGIC CONTROLLERS (Elective)

Time : 3 Hours

Max. Marks : 100

Instruction : *Answer **any five full** questions.*

1. a) Describe the operation of PLC with neat block diagram. **10**

   b) What are the advantages of PLC over relay logic ? **10**

2. a) Explain the addressing formats used for different I/O in PLC. **10**

   b) Compare PLC and personal computer. **10**

3. a) Write a ladder diagram for domestic washing machine which includes rinse wash and dry function. **10**

   b) Explain retentive type timer function with suitable examples. **10**

4. a) Explain the following communication protocol RS 232 and profibus. **10**

   b) Draw the PLC ladder diagram for controlling a traffic signal and direction of traffic flow is in one direction. **10**

5. a) What are the major principles to be followed in designing the manual back up capability for LCU. **10**

   b) Discuss the different security issues for designing the LCU. **10**

6. a) With a neat block diagram, explain generalized DCS architecture. **10**

   b) Explain field bus standardization. How field bus technology is different from 4-20 mA technology. **10**

7. a) Explain briefly the various of OSI sequence model. **10**

   b) Discuss the importance of low level and high level operator interface. **10**

8. Write a short notes on following : **(4×5=20)**

   i) Trouble shooting.

   ii) Inter locks.

   iii) Manual back up.

   iv) Analog PLC operation.

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