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220943

**4th Sem. / Electrical  
Sub. PLC and Microcontrollers**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note: Multiple type Questions. All Questions are compulsory. (6x1=6)**

Q.1 In PLC letter C stand for

- a) Common                      b) Controller
- c) Control                      d) Configure

Q.2 8051 has \_\_\_\_\_ no. of ports.

- a) 4                                  b) 3
- c) 2                                  d) 6

Q.3 \_\_\_\_\_ are the component of PLC

- a) Input Module                  b) Output module
- c) CPU                              d) All

Q.4 Horizontal lines in ladder diagram are called

- a) Rails                              b) Steps
- c) Racks                              d) Rungs

Q.5 8051 has ROM of

- a) 4K Bytes                          b) 8K bytes
- c) 6K bytes                          d) None

Q.6 PLC operates on the following

- a) Digital                              b) Impulse
- c) Analog                              d) Frequency

**SECTION-B**

**Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)**

Q.7 Define PLC.

Q.8 Define the term latch.

Q.9 Define baud rate.

Q.10 Write full form of RAM.

Q.11 Write one time instruction of PLC?

Q.12 Write full form of CPU.

### SECTION-C

**Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)**

Q.13 Write four limitations of relays.

Q.14 Write down the advantages and disadvantages of PLC's over eletcomagnetic relays.

Q.15 Write four arithmetic instructions of PLC.

Q.16 Draw pin diagram of 8051 microcontroller and explain function of port3 pins.

Q.17 Write four applications of PLC.

Q.18 How PLC can be used for Motor Sequence Control.

Q.19 Explain two types of instruction of 8051.

Q.20 Explain the memories used in microcontroller 8051.

Q.21 Explain serial port operation of 8051.

Q.22 Explain star-Delta starter using PLC.

### SECTION-D

**Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)**

Q.23 Explain working of PLC with the help of block diagram.

Q.24 Explain interfacing of 7 segment with 8051 microcontroller.

Q.25 Write short note (Any two)

a) Interfacing of Keypad

b) Memory organization in PLC

c) Traffic light control using PLC