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**5th Sem./ Electrical Engineering
Subject : Programmable Logic Controllers
& Microcontrollers**

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 _____ is designed to operate in noisy industrial environment.

- a) PID
- b) PLC
- c) Micro processor
- d) Micro Controller

Q.2 PLC was invented in

- a) 1968
- b) 1980
- c) 1990
- d) 1950

Q.3 CPU is called _____ of PLC.

- a) Long
- b) Heart
- c) Brain
- d) Kidney

Q.4 There are _____ timers in PLC

- a) 8
- b) 4
- c) 12
- d) 6

Q.5 Horizontal lines in ladder diagram are called

- a) Rung
- b) Rail
- c) Rack
- d) Chasis

- Q.6 In SCADA, D Stands for
- a) Data
 - b) Discrete
 - c) Display
 - d) Dual
- Q.7 SCADA is a _____.
a) Software b) Process
c) System d) Hard ware
- Q.8 In 8051 there are _____ 16 bit registers
- a) 0
 - b) 1
 - c) 2
 - d) 3

- Q.9 8051 has _____ number of pins
- a) 20
 - b) 40
 - c) 80
 - d) 50

- Q.10 There are _____ number of ports in 8051
- a) 2
 - b) 3
 - c) 4
 - d) 5

Section-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define ALU.
- Q.12 Define output scan
- Q.13 What is assembler.
- Q.14 What is PSU?
- Q.15 ROM stands for _____.
- Q.16 What is RTC?
- Q.17 Define DPTR.

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- Q.18 Define Interrupt.
Q.19 Define PLC.
Q.20 Expand LCD.

Section-C

Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 Discuss the limitations of relays.
Q.22 Explain Power Supply section of PLC.
Q.23 Write short note on RTC.
Q.24 Discuss Room automation application of PLC.
Q.25 Write short note on SACDA system.
Q.26 Compare between micro processor and micro controller.
Q.27 Draw the Pin diagram of 8051.
Q.28 Compare CISC and RISC technology.
Q.29 Write down 5 applications of micro controller.
Q.30 Discuss stepper motor interface of micro controller.
Q.31 Discuss times operation of Micro Controller.
Q.32 Write short note on I/O port structure of microcontroller.
Q.33 Discuss washing machine application of PLC.
Q.34 Discuss various interrupts of micro controller.
Q.35 What are Input/output operations of assembly language programming.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

- Q.36 Draw the building blocks of PLC and also explain functions of each block.
Q.37 What is ladder programming? Discuss its use in PLC field.
Q.38 Discuss the 7 segment interface of micro controller.