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220943

4th Sem. / Electrical Engineering
Subject : PLC & Microcontrollers

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 PLC was invented in

a) 1968 b) 1980

c) 1990 d) 1950

Q.2 8051 has _____no. of pins.

a) 40 b) 30

c) 28 d) 16

Q.3 Which is not component of PLC.

a) Input Module b) Output module

c) CPU d) None

Q.4 Parallel line in ladder diagram are called

a) Rails b) Steps

c) Racks d) None

Q.5 Addition operations is similar is PLC to

a) OR b) AND

c) NOT d) None

Q.6 8051 has how many 16 bit registers

a) 2 b) 3

c) 1 d) 0

Section-B

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

Q.7 Define PLC.

Q.8 Define retentive timer.

Q.9 List one application of PLC.

Q.10 Write full form of SCON.

Q.11 Write one Logical instruction of PLC.

Q.12 Write full form os SFR.

Section-C

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

Q.13 List four merits of PLC over relays.

Q.14 Compare micro controller and microprocessor.

Q.15 Write any four instructions of PLC.

Q.16 Draw pin diagram of 8051 micro controller.

Q.17 Explain ladder logic with simple example.

Q.18 What is motor sequence control?

Q.19 Explain two arithmetic instructions of 8051 with example.

Q.20 What are the various interrupts of 8051 microcontroller?

Q.21 What serial port operation.

Q.22 What are the various programming language used in PLC. Explain any one.

Section-D

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

Q.23 Explain working of 8051 micro controller with the help of block diagram.

Q.24 Explain motor in forward and reverse direction, an application of PLC.

Q25 Write short note (any two)

a) Interfacing of Keypad

b) Memory organization in PLC

c) Timer instructions of PLC