Q.24 Write a ladder diagram for logical ANDing of three inputs.

Q.25 Explain two logical instructions of PLC

Q.26 Explain event driven sequencer with an example

Q.27 Explain comparison instructions of PLC

Q.28 Name five PLC manufactures

Q.29 Explain the interfacing of seven segment LED with 8051

Q.30 Explain different buses of 8051

Q.31 Explain the internal memory organization of 8051

Q.32 What do you mean by addressing mode

Q.33 Explain two data transfer instruction of 8051

Q.34 Explain the operation of timer 8051

Q.35 Draw the pin diagram of 8051

SECTION-D

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

Q.36 Explain the block diagram of 8051

Q.37 Explain the architecture of PLC

Q.38 Explain the use of PLC in packaging industry.

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Roll No. .....

6th Sem / Elect, Eltx, Mecatronics, GE, Power Station Engg., Elect & Eltx Engg.

Subject:- Programmable Logic Controllers and Microcontrollers/ Mic. Cont. & PLCs

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Which component of a PLC is responsible for storing and executing the control program?

a) Input module b) Output module

c) Processor (CPU) d) Power supply

Q.2 Which among the following is not a typical output device controlled by a PLC?

a) Motor b) Sensor

c) Valve d) None of the above

Q.3 Which programming language is commonly used in PLC

a) C++ b) html

c) Ladder Logic d) Assembly language

Q.4 The purpose of PLC scan cycle is

a) to turn ON the power of PLC

b) to turn OFF the power of PLC

c) to execute the control program repeatedly

d) to perform diagnostic on PLC hardware

Q.5 PSW of 8051 is_____ bit wide.

a) 1 b) 4

c) 8 d) 16

Q.6 Which type of memory retains the data even when the power is turned OFF

a) RAM b) EEPROM

c) Cache memory d) none of the above

Q.7 SP in 8051 is_____ bit wide.

a) 1 bit b) 4 bit

c) 8 bit d) 16 bit

Q.8 The full form of ALE is

a) Address level enable

b) Address latch enable

c) Address level extension

d) Address latch extension

Q.9 Which among the following is not bit addressable in 8051

a) A b) P0

c) PSW d) SP

Q.10 Default register bank in 8051 is

a) Bank 0 b) Bank 1

c) Bank 2 d) Bank 3

SECTION-B

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

Q.11 PLC stands for_____ (Programmable Logic Controller)

Q.12 Instruction to calculate the square root of source is_____

Q.13 Full form of RTC is_____

Q.14 _____ instruction copies from one list to another

Q.15 FBD stands for_____

Q.16 8051 has_____I/O Pins

Q.17 Internal ROM size of 8051 is_____.

Q.18 Port 1 of 8051 is used as multiplexed address and data bus. (True/False)

Q.19 Number of Timers available in 8051 is_____

Q.20 Address location associated with TF0 interrupt is _____

SECTION-C

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

Q.21 List five advantages of PLC based control system over conventional relay based systems

Q.22 With a neat sketch explain the basic block diagram of PLC.

Q.23 Explain I/O modules of PLC.