Q.26 Explain the function of EA pin in 8051

Q.27 Explain the alternate role of Port 3 of 8051 microcontroller

Q.28 Explain any two assembly directives

Q.29 Explain two data transfer instructions of 8051

Q.30 Briefly explain the interrupt system of 8051 microcontroller

Q.31 Explain the interfacing of LCD with microcontroller

Q.32 Write a ladder program to control a motor.

Q.33 Explain the addressing modes of 8051

Q.34 Explain the operation of doorbell using PLC

Q.35 Differentiate between microcontroller and microprocessor

SECTION-D

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

Q.36 Explain the use of PLC in microwave oven

Q.37 With a neat sketch explain the architecture of PLC

Q.38 Explain the pin diagram of 8051 microcontroller

Roll No. .....

6th Sem./Branch : Elect, Eltx, Mechatronics, 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 Full form of PLC is_____

a) Programmable linear computer
b) Programmable linear controller
c) Programmable logic computer
d) Programmable logic controller

Q.2 Which among the following is not a typical PLC input device ?

a) Motor b) Sensor
c) Push button d) Limit Switch

Q.3 Which of the following is NOT a typical application of PLCs?

a) Traffic Light Control Systems
b) Elevator Control Systems
c) Home Entertainment Systems
d) Packaging Machinery Control Systems

Q.4 During PUSH operation in 8051 microcontroller SP is_____

a) Incremented by 1 b) Incremented by 2
c) Decremented by 1 d) Decremented by 2

Q.5 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.6 In a ladder logic diagram, what does a normally open contact symbol represent

a) A condition that must be true for the associated rung to be executed
b) A condition that must be false for the associated rung to be executed
c) A coil or output device
d) A memory element

Q.7 PC register in 8051 is_____bit wide

a) 1 bit b) 4 bit
c) 8 bit d) 16 bit

Q.8 Internal ROM available in 8051 is

a) 4K Bytes b) 8K Bytes
c) 16K Bytes d) Zero bytes

Q.9 Which among the following is bit addressable in 8051

a) SBUF b) B
c) TMOD d) SP

Q.10 Vectored address associated with TF1 is

a) 0003 b) 000B
c) 0013 d) 001B

SECTION-B

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

Q.11 Full form of PC is_____

Q.12 Full form of PCON is_____

Q.13 The highest number that can be stored in 8 bit register is _____

Q.14 PSW of 8051 contains Zero flag. (True/False)

Q.15 One Byte=_____bits

Q.16 8051 has_____Ports

Q.17 Full form of RTC is_____

Q.18 Port1 of 8051 is used as high order address bus. (True/False)

Q.19 8051 has 2 Timers. (True/False)

Q.20 Address location associated with TFO interrupt is_____

SECTION-C

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

Q.21 What do you mean by ON-Delay timers?

Q.22 List five limitations of relays

Q.23 Explain any two arithmetic instructions of PLC

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

Q.25 Explain the LIM instructions