Roll No. ....

5th Sem / Branch : Elect
Sub.: Programmable Logic Controllers and Micro Controllers

Time : 3Hrs.   M.M. : 100

SECTION-A

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

Q.1 CPU reads program instruction and input data from.   (COE1)
  a) I/O port   b) Power supply
  c) Memory   d) Limit switch

Q.2 Sinking is common   (COE2)
  a) Ground Line   b) Source Line
  c) Pulse   d) Output

Q.3 Which of following is timer instruction.   (COE3)
  a) TON   b) Toff
  c) RTO   d) All of these

Q.4 Full form of mov instruction   (COE3)
  a) Multiply   b) Move
  c) Multi vibrators   d) Move on instruction

Q.5 8051 micro controller has   (COE6)
  a) 32 bytes internal RAM
  b) 128 byes internal RAM
  c) 16 bytes internal RAM
  d) 80 bytes internal RAM

Q.6 Total arithmatic instructions used in 8051 are   (COE7)
  a) 8   b) 6
  c) 5   d) 4

Q.7 Assembler translate ALP into   (COE9)
  a) Error   b) CPU
  c) Machine code   d) None of these

Q.8 Keyboard is used for   (COE10)
  a) Output Interface   b) Input interface
  C) Both (a) & (b)   d) None of these

Q.9 Basic instructions used in ladder program are   (COE3)
  a) Bit   b) Counter
  c) Timer   d) All of these

Q.10 8051 Microcontroller is   (COE6)
  a) 40 Pin Dip   b) 60 Pin Dip
  c) 35 Pin Dip   d) None of these

SECTION-B

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

Q.11 FBD stands for   (COE1)

Q.12 _____ is form of counter that is used for sequential control?   (COE2)

Q.13 _____ function will examine the source value and mark out bit using mask. (COE3)

Q.14 CTD instruction stands for _____. (COE4)

Q.15 SCADA stands for _____. (COE6)

Q.16 DCS stands for _____ (COE6)

Q.17 RISC stands for ____ (COE7)

Q.18 _____ instruction copy from one list to another. (COE3)

Q.19 Assembler directives are also called_____ operation. (COE9)

Q.20 _____ directive is used to assign a name to constant.

SECTION-C

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

Q.21 Explain sequential functional chart (SFC programming) (COE1)

Q.22 Compare source and sinking connection of I/O module. (COE2)

Q.23 Explain limit test instruction. (COE3)

Q.24 Draw ladder diagram to start/stop a motor using single push switch green lamp glow when motor is on and red lamp glow when motor is off. (COE4)

Q.25 Explain application of motor in forward and reverse direction without any time gap. (COE5)

Q.26 Explain how Mocro controller is different from Microprocessor. (COE7)

Q.27 What do you mean by interrupt priority? Give priority order of interrupts of 8051. (COE8)

Q.28 Explain in brief define byte (DB) assembler directive. (COE9)

Q.29 Explain functions of racks and chasis in PLC. (COE2)

Q.30 Explain RTO instruction and Logic table for RTO instruction. (COE3)

Q.31 Explain in brief I/O port structure of microcontroller 8051. (COE7)

Q.32 Differentiate MOV and MOVX instruction used for data transfer in 8051 Mircrocontroller.

Q.33 Discuss role of SCADA in Industry. (COE6)

Q.34 Discuss data transfer operations. (COE9)

Q.35 What is the difference between a call and AJMP instruction

SECTION-D

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

Q.36 Explain keyboard interfacing with micro controller? (COE10)

Q.37 Draw and Explain building block of PLC with their function and application. (COE1)

Q.38 Explain different serial date communication methods used in 8051 Microcontroller. (COE8)