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**5th Sem / Sub: Programmable Logic Controllers &
Micro Controllers.
Branch. :Electrical**

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Which of the following is PLC programming language. (COE-1)
a) Ladder Diagram b) Structure text
c) Instruction List d) All of these
- Q.2 System memory is used by PLC for (COE-2)
a) Process control b) Relay control
c) Solenoid control d) None of these
- Q.3 XIC Instruction is (COE-3)
a) Input bit instruction
b) Output timer instruction
c) Input counter instruction
d) None of these
- Q.4 Which of following are boolean instructions (COE-3)
a) And, OR b) TON, TOFF
c) XIC d) SQR
- Q.5 8051 Microcontroller is
a) 40 PIN DIP b) 35 PIN DIP

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- c) 60 PIN DIP d) None of these
- Q.6 Total addressing modes used in 801 micro controller are (COE-7)
a) 8 b) 5
c) 4 d) 7
- Q.7 Program made of 0 and 1 is called (COE-9)
a) ALP b) EQU
c) Machine language d) None of these
- Q.8 LCD display is used for (COE-10)
a) Output interface b) Input Interface
c) Both A & B d) None of these
- Q.9 Sinking is common (COE-2)
a) Ground Line b) Source Line
c) Pulse d) Output
- Q.10 Basic Instructions used in ladder program are (COE-3)
a) BIT b) TIMER
c) Counter d) All of these

SECTION-B

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

- Q.11 Ladder logic is being developed to mimic _____ logic. (COE-1)
- Q.12 Sourcing is common _____ line. (COE-2)
- Q.13 _____ instruction will allow a line to be true for only one scan. (COE-3)
- Q.14 Ladder diagram is used for _____. (COE-4)

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- Q.15 PLC stands for _____. (COE-5)
 Q.16 Scada focus on _____ level. (COE-6)
 Q.17 Register SBUF stands for _____. (COE-7)
 Q.18 CISC stands for _____. (COE-7)
 Q.19 8051 Microcontroller has _____ bytes of ROM. (COE-5)
 Q.20 ALP stands for _____. (COE-9)

SECTION-C

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

- Q.21 Compare electromagnetic relay and PLC. (COE-1)
 Q.22 Explain PLC scanning process. (COE-2)
 Q.23 Explain real time clock (RTC) function. (COE-3)
 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. (COE-4)
 Q.25 Explain packing process control application of PLC. (COE-5)
 Q.26 Compare CISC and RISC technology. (COE-7)
 Q.27 Explain register indirect addressing mode. (COE-8)
 Q.28 Explain in brief define byte (DB) assembler directive. (COE-9)
 Q.29 Explain PLC power supply requirement. (COE-2)
 Q.30 Enlist basic bit instructions used in ladder programme. (COE-3)
 Q.31 Explain special function register used in microcontroller 8051. (COE-7)

- Q.32 Differentiate MOV and MOVX instruction used for data transfer in 8051 microcontroller.
 Q.33 Discuss role of scada in industry. (COE-1)
 Q.34 Explain any two SFR of 8051 microcontroller. (COE-8)
 Q.35 Write short note PLC memory. (COE-7)

SECTION-D

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

- Q.36 With the help of block diagram, explain function of different blocks of PLC. (COE-1)
 Q.37 What do you mean by counters? Explain different types of counters? (COE-3)
 Q.38 Draw pin diagram of 8051 microcontroller. Explain function of each Pin? (COE-7)