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180953/170953

**Electrical**  
**Subject:- Logic Controller and Micro Controller**

Time : 3Hrs. M.M. : 100

**SECTION-A**

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

Q.1 The most popular language for PLCs is:

- a) Ladder diagram b) C++
- c) OOP+ d) VHDL

Q.2 SCADA stands for:

- a) Supervisory Computer And Data Analog
- b) Supervisory Computer And Data Acquisition
- c) Supervisory Control And Data Acquisition
- d) Supervisory Control And Data Aspiration

Q.3 The programmable logic controllers are used in \_\_\_\_\_

- a) Automation b) Manufacturing
- c) Both a & b d) None of these

Q.4 8051 Microcontroller has \_\_\_\_\_ number of pins.

- a) 45 b) 50

- c) 20 d) 40

Q.5 8051 microcontroller are manufactured by which of the following companies?

- a) Atmel b) Philips
- c) Intel d) All of the mentioned

Q.6 8051 series has how many 16 bit registers?

- a) 2 b) 3
- c) 1 d) 0

Q.7 Assembly line is the application of \_\_\_\_\_.

- a) Microcontroller b) PLC
- c) Networking d) None of these

Q.8 LCD stands for.

- a) liquid class display
- b) Liquid crystal display
- c) Laser crystal device
- d) none of the above

Q.9 A seven segment display is used for displaying \_\_\_\_\_.

- a) Image b) Text
- c) Numbers d) All the above

Q.10 The standard form of MTU is \_\_\_\_\_.

- a) Master terminal unit b) Main terminal unit
- c) Main unit d) None of these

## **SECTION-B**

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

- Q.11 What is PLC?
- Q.12 What is RTC?
- Q.13 Give any one limitation of relay.
- Q.14 Define the scan cycle.
- Q.15 What is W.D.T.?
- Q.16 What is D.O.L starter?
- Q.17 DDC stands for.
- Q.18 What are special function registers?
- Q.19 Give any two applications of PLC.
- Q.20 Give the name of any two PLC manufacturer.

## **SECTION-C**

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

- Q.21 List of building block of PLC and write their functions.
- Q.22 Which are the different programming languages? Explain in brief.
- Q.23 What is mask? Explain its function in Masked Equal to (MEQ) instruction.
- Q.24 What do you mean by counters? Explain different types of counters.
- Q.25 How a microcontroller differs from a microprocessor?

- Q.26 Explain 8051 memory organization.
- Q.27 What are the addressing modes of 8051 microcontroller?
- Q.28 Explain PUSH and POP instruction.
- Q.29 What is the difference between Short jump(SJMP), Long Jump (LJMP) and Absolute Jump (AJMP) ? Explain.
- Q.30 Explain the function of different bits of TMOD register in timer operation.
- Q.31 Write the steps to program 8051 for serial data transmission.
- Q.32 Explain LCD interfacing with 8051.
- Q.33 What are the applications of PLC.
  
- Q.34 What are the advantages of SCADA over other protocols?
- Q.35 Explain the basic operation and principles of PLC.

## **SECTION-D**

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

- Q.36 Write the steps to execute an assembly Language program.
- Q.37 Explain seven segment display interfacing with 8051.
- Q.38 Write program to fill external RAM location from 0100H to 0400H with data 65H.