Q.34 Write a short note on Watch Dog Timer.

Q.35 Write five advantages of DCS.

SECTION-D

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

Q.36 Draw and explain block diagram of SCADA in detail.

Q.37 Define Timer. Explain all timer instructions with the help of ladder diagram.

Q.38 Explain different programming terminals used in PLC. also write about power supply of PLC.

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Time : 3Hrs.   M.M. : 100

SECTION-A

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

Q.1 A SCADA system will include
a) HMI
b) Networks
c) Input/Output controllers
d) All are correct

Q.2 Full form of DDC is Direct _____ Control.
a) Data   b) Digital
c) Delay   d) None of these

Q.3 How many retentive timers are there is PLC
a) One   b) four
c) Three   d) Seven

Q.4 The accumulator of UP Counter will
a) Increment   b) Decrement
c) Count time   d) None of these

Q.5 One of the following is an input device
a) Motor   b) Light
c) Valve   d) Sensor

Q.6   In DCS if one site fails to operate
a)   The remaining sites can continue operating
b)   All the sites will stop working
c)   Both A & B
d)   None of these
Q.7   RTC instruction Stand for Real time _____.
a)   Clock   b)   Counter
c)   Centre   d)   Control
Q.8   Which one is called the brain of PLC
a)   CPU   b)   Input Module
c)   Output Module   d)   None of these
Q.9   Which one is not included in Ladder Diagram
a)   Rung   b)   Rails/Uprights
c)   Inputs   d)   Scan time
Q.10 In times, when accumulator value reaches Present value
a)   Done bit is High   b)   Enable it is high
c)   Timer bit is high d)   All are Correct

SECTION-B

Note: Objective type questions. All questions are compulsory.   (10x1=10)
Q.11 Write full form of HMI.
Q.12 Draw symbol of any counter instruction.
Q.13 Tell two applications of PLC.
Q.14 Draw ladder diagram of AND instruction.
Q.15 Tell two applications of SCADA.

Q.16 Write full form of PLC.
Q.17 Draw Symbol of RTC instruction.
Q.18 Name two PLC manufactures.
Q.19 Tell two limitation of relays.
Q.20 Draw symbol of any two arithmetic instructions.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions.   (12x5=60)
Q.21 Explain any one programming language of PLC.
Q.22 Write differences between counter up and down instruction.
Q.23 Explain in brief about input-output hardware of DCS.
Q.24 Write about the selection criterion of PLC as per industrial demand.
Q.25 Write a short note on RTU.
Q.26 Explain any two comparison instructions using ladder diagram.
Q.27 Write five advantages of HMI.
Q.28 Write about function of different blocks of PLC.
Q.29 Tell five differences between DCS and SCADA.
Q.30 Explain the basic operation of PLC.
Q.31 Explain briefly about the memory structure of PLC.
Q.32 Write a short note on DDC.
Q.33 Explain any two arithmetic instructions using ladder diagram.