Q.27 What is the function of MOV and Reset Instruction?

Q.28 List any 5 applications of SCADA.

Q.29 Explain DCS with its operation.

Q.30 Write a short note on RTU.

Q.31 What do you mean by watchdog timer?

Q.32 Differentiate between DCS and SCADA.

Q.33 Explain retentive and non-retentive timer

Q.34 Name different languages used in PLC.

Q.35 List any 5 advantages of AC drive over DC drive.

Section-D

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

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

Q.37 Differentiate between open architecture and dedicated system.

Q.38 Draw block diagram of SCADA and explain function of each block.

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Subject : Industrial Automation

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 In PLC operations _____ checks the status at the input side.
a) Input scan b) Program scan
c) Output scan d) None

Q.2 The advantage of PLC are
a) Easy maintenance b) Reliability is high
c) Small in size d) all of the above

Q.3 FBD stands for _____.
a) Functional block division
b) Functional block diagram
c) First block division
d) None

Q.4 EQU, LES, LEQ instructions are example of which of the following instructions
a) Comparison b) Sequencer
c) Data handling d) Composite

Q.5 The _____ counter that counts the event that has happened and decremented the counted number by one count.
a) UP counter   b) DOWN counter
c) Weekly counter d) Hourly counter

Q.6 In ladder logic, normally open contact in parallel are used to implement _____ function.
a) AND   b) OR
c) NOT   d) NOR

Q.7 DCS stands for _____.
a) Distributed control system
b) Data control system
c) Data compile system
d) None

Q.8 IL stands for _____
a) Input list   b) Instruction list
c) Instruction line d) None

Q.9 Which of the following is used to build an electric drive
a) Source   b) Motor
c) Control unit d) all of the above

Q.10 HMI stands for _____.
a) Human machine input
b) Human machine interface
c) Human multiple interface
d) None

Section B

Note: Objective types Questions. All Questions are compulsory.   (10x1=10)

Q.11 PLC stands for _____.

Q.12 Draw the symbol of XIC.

Q.13 RTU stands for ____.

Q.14 Expand RAM.

Q.15 List any one PLC manufacturer

Q.16 ____ is an electromagnetic switch.

Q.17 What is AC drive?

Q.18 PLC has fast response time. (True/Fale)

Q.19 List any one arithmetic instruction.

Q.20 What is scan time in PLC.

Section-C

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

Q.21 What are the various components of PLC?

Q.22 Discuss any 5 limitation of relay.

Q.23 Write any 5 applications of PLC.

Q.24 Describe working principle of PLC.

Q.25 What is the memory structure of PLC? Explain.

Q.26 Name any 5 types of arithmetic instructions used in PLC.