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5th Sem. / ECE, Automation & Robotics, ECE
(For speech and Hearing Impaired)
Subject : PLC & SCADA

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 What is one function of a PLC in automation? (CO1)

a) Monitoring temperatures
b) Directly performing mechanical tasks
c) Sending signals to relays
d) None of the above

Q.2 Which of the following is a type of memory in PLC? (CO1)

a) Cache memory b) Volatile memory
c) Non-Volatile memory d) All of the above

Q.3 Boolean logic is based on which number system?(CO2)

a) Decimal b) Binary
c) Hexadecimal d) Octal

Q.4 Which of these is a basic component of a PLC system? (CO1)

a) CPU b) GPU
c) RAM d) Hard Drive

Q.5 What is the role of sequencer in PLC programming? (CO2)

a) Control power supply
b) Handle complex sequences
c) Store data files
d) None of the above

Q.6 Which device is used to visualize data and control system in SCADA? (CO5)

a) Display Monitor
b) Graphics Card
c) HMI (Human Machine Interface)
d) Server

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define the term "Relay" in the context of automation. (CO4)

Q.8 What is the function of the CPU in a PLC? (CO1)

Q.9 State one use of binary arithmetic in PLC programming. (CO2)

Q.10 What is the significance of the Comparison instruction in PLC programming? (CO4)

Q.11 Explain what "Alarming" means in SCADA systems. (CO5)

Q.12 What does the Timer function do in PLC programming? (CO2)

SECTION-C

Note: Short answer type Question. Attempt any eight questions out of Ten Questions. (8x4=32)

Q.13 Describe the basic operations of a PLC in an automated control system. (CO1)

Q.14 Discuss the importance of ladder logic in PLC programming. (CO2)

Q.15 Explain the difference between relay logic and ladder logic. (CO2)

Q.16 Write a short note on the function of the Counter data file in PLCs. (CO4)

Q.17 Describe the use of Bit instructions in ladder programming. (CO4)

Q.18 What are the functions of Data Handling instructions in PLCs? (CO3)

Q.19 Explain the steps involved in creating a Tag in SCADA . (CO5)

Q.20 Describe any two types of numeric animations in SCADA systems. (CO5)

Q.21 Explain the role of labels and arrows in SCADA graphics. (CO5)

Q.22 How does data logging work in SCADA systems? (CO5)

SECTION-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x8=16)

Q.23 Describe the functions and importance of Input and Output data files in PLC programming. (CO4)

Q.24 Explain the use of Timer and Counter instructions in ladder logic programming with examples. (CO3)

Q25 Discuss the role and significance of alarming logging, and reporting in SCADA systems. (CO5)