Exam.Code:0936
Sub. Code: 6987

1019

B.E. (Electrical and Electronics Engineering)
Sixth Semester
EE-611: Programmable Logic Controller and Distributed Control System

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

a) Define SCADA?

b) List selection criteria for PLC?

c) Draw a connection diagram to connect switching devices with PLC?

d) Explain PLC operational fault?

e) State limitations of DCS? (5x2)

UNIT – I

II. a) Explain first, second and third generation of SCADA architecture?

b) Write a note on SCADA used in any industrial applications? (5,5)

III. a) State and explain the advantages and disadvantages of PLC in detail?

b) What is PLC scan sequence? Describe the operation of SKIP in PLC? (5,5)

IV. a) Draw the schematic of input module of PLC?

b) Discuss the isolated/non isolated input output wiring to PLC? (5,5)

UNIT – II

V. a) Draw the ladder diagram for the following truth table inputs:

I_1	I_2	I_3	I_4
0	0	1	1
0	1	0	1
1	0	1	0
1	1	1	1

b) Discuss the level control system with hardware and ladder diagram. (5,5)

P.T.O.

VI. a) Develop the ladder logic for NOT, AND and EXNOR logic.

b) Draw the external wiring diagram and ladder program for 3-phase motor control in forward and reverse direction. (5,5)

VII. a) Explain the concept of DCS. List and explain the function of each level of DCS?

b) Explain the use of SUBTRACT function for conveyor count application with neat schematic? (5,5)

x-x-x