

Total No. of Printed Pages:2

SUBJECT CODE NO:- H-235
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (EC/ECT/E&C) (Sem-II)
Elective-II: Advanced Industrial Automation – II
[Revised]

[Time: Three Hours]

[Max. Marks:80]

Please check whether you have got the right question paper.

N.B.:1) Q.No.1 and 6 are compulsory.

2) Solve any two questions from Section 'A' and solve any two from section 'B' from remaining.

Section A

- | | | |
|-----|---|----------|
| Q.1 | Solve any Five | 10 |
| | a) Classify control panels
b) What do you mean by PI diagram?
c) Enlist different function of SCADA.
d) Give the significance of Non-Return Valve.
e) Develop and function using pneumatic valves.
f) Enlist different PLC's available in market.
g) Give significance of meter in-meter out in pneumatics. | |
| Q.2 | a) Explain any typical PI diagram with instrument symbol.
b) Develop $A^+B^-C^+C^-B^+A^-$ pneumatic control circuit using cascade method. | 07
08 |
| Q.3 | a) Explain SCADA system configuration with neat diagram.
b) Explain pneumatic Time Delay valve with suitable example. | 08
07 |
| Q.4 | a) Explain mounting & installation guideline of control panel design.
b) What are different SCADA protocols? Explain in detail. | 08
07 |
| Q.5 | a) Draw & explain Electro-pneumatic system in detail.
b) Give the difference between SCADA & PLC for any 7 points. | 08
07 |

Section B

- | | | |
|-----|--|----|
| Q.6 | Solve any five | 10 |
| | a) Define kick-off meeting.
b) State objectives of automation system.
c) State Pascal law.
d) Give significance of PRV in hydraulics.
e) Enlist different Actuators in hydraulics.
f) Develop OR function using hydraulic valves
g) What do you mean by B.O.M? | |

Q.7	a) Explain hydraulic system with its Block Schematic.	07
	b) Explain Irrigation canal Automation strategy with its block schematic.	08
Q.8	a) Develop Hydraulic control circuit for clamp & drill operation with the help of PRV.	08
	b) Design carton sorting machine with the help of operational & logic diagram.	07
Q.9	a) Find out the hydrostatic pressure in Bar at bottom of container.	08
	b) Draw & Explain Automation control strategy of water treatment plant.	07
Q.10	a) Design Dough maker with operation diagram logic diagram & control panel design diagram.	10
	b) Describe Kiln Automation in detail.	05