Q.29 Describe solenoid valve.

Q.30 Advantages of diaphragm operated valve.

Q.31 Describe interlocking & sequencing circuit.

Q.32 Differentiate between Temp switch & pressure switch.

Q.33 Draw the basic structure of control valves issued in control system.

Q.34 Describe flapper nozzle system in control system.

Q.35 Describe proportional controller in a control system.

SECTION-D

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

Q.36 Explain Any two:-

a) Principle & construction of Butterfly valve

b) Principle & construction of Globe valve

c) Principle & construction of Ball valve

Q.37 Attempt any two:-

a) P/I converter

b) Flow switches

c) Flow loop control system

Q.38 Explain the process with example of all process variables (i.e. liquid Level controller)

Roll No. .....

5th Sem / IC, EI

Subject:- Process Control

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 A transducer convert:-

a) One form of energy to another form

b) Electrical to mechanical

c) Electrical to non-electrical

d) All of these

Q.2 What is standard value of pressure in I/P converter:-

a) 3-15 PSI b) 0-12 PSI

c) 3-12 PSI d) 0-15 PSI

Q.3 PLC stands for :-

a) Programmable logic controller

b) Proper logic control

c) Programmable level controller

d) All of these

Q.4 PI stands for:-

a) Propositional Integral b) Propositional Initial

c) Positional Initial d) Positional Integral

Q.5 What is the SI unit of force -

a) Newton b) Candela

c) Kelvin d) Pascal

Q.6 Rotameter fixed in :-

a) Vertical Position b) Horizontal Position

c) Any position d) Tapered Position

Q.7 "Accuracy" Defined as-

a) Closeness to the true value

b) Repeatability

c) Never changing value

d) All of true

Q.8 Physical parameter change due to :-

a) Internal & External disturbance

b) Power

c) Voltage

d) Current

Q.9 Integral controller also known as :-

a) Rate controller b) Reset controller

c) Both of these d) None of these

Q.10 For fast response which control required.

a) P-controller b) I-controller

c) D-controller d) All of above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What is process lag.

Q.12 SI unit of Pressure.

Q.13 Write down 2 merits of derivative controller.

Q.14 What is an amplifier.

Q.15 What is hydraulic Actuator.

Q.16 Write down 3 types of control valve.

Q.17 What are the process variables.

Q.18 Define Dead zone.

Q.19 Expand PLC.

Q.20 Define Switch.

SECTION-C

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

Q.21 Write the short note on Auto Transformer.

Q.22 Describe process log & measurement lag.

Q.23 Write a short note on ON-OFF control mode.

Q.24 Describe PI controller & its merits also.

Q.25 Differentiate between pneumatics & hydraulic systems.

Q.26 Write a short note on I/P converter.

Q.27 Explain all pneumatic control elements.

Q.28 What is control valves & explain butterfly valve.