

- Q.28 Write five applications of control valve.
- Q.29 How temperature switch is used in industry?
- Q.30 Write a short note on globe valve.
- Q.31 Explain the concept of flapper nozzle system.
- Q.32 Explain flow loop control system with the help of diagram.
- Q.33 Write principle of operation of solenoid valve.
- Q.34 Write five differences between hydraulic and pneumatic control system.
- Q.35 Explain briefly pneumatic actuator.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain the principle of operation and constructional details of diaphragm operated control valve.
- Q.37 Define Hydraulic actuator. Explain the working of hydraulic valve.
- Q.38 Explain the concept of interlocking and Sequencing circuit.

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5th Sem / Branch : IC, EI Sub.: Process Control

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Solenoid is device that converts an electrical signal into _____ motion.
- a) Mechanical b) Derivative
c) Integral d) Proportional
- Q.2 Temperature switches are also called as
- a) Thermostat b) Relay switch
c) Thermistor d) RTD
- Q.3 Which fluid is used in hydraulic power systems?
- a) Water
b) Oil
c) Non-compressible fluid
d) All are correct
- Q.4 The deviation of controlled variable from the set point is called
- a) Dead Time b) Error
c) Process Lag d) Control Lag

- Q.5 An Air-conditioner is an example of
- Open loop system
 - Closed loop system
 - Both (a) & (b)
 - None of these
- Q.6 Which valve is most commonly used in house hold applications?
- Globe valve
 - Diaphragm operated valve
 - Solenoid Valve
 - None of these
- Q.7 IN Switches, NC stands for
- Normally closed
 - Never closed
 - Not clear
 - None of these
- Q.8 Set of operations performed in a sequential manner to get desired output is known as
- Valve
 - Transmitter
 - Actuator
 - Process
- Q.9 Flapper nozzle is used in a/an ____.
- Hydraulic
 - Electronic
 - Pneumatic
 - None of these
- Q.10 Total windings in an autotransformer are
- Two
 - One
 - Three
 - None of these

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SECTION-B

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

- Q.11 Write two applications of actuator.
- Q.12 Expand PID.
- Q.13 Write two applications of Ball valve.
- Q.14 Integral time is given by ____.
- Q.15 Write two types of controller mode.
- Q.16 Define transducer.
- Q.17 Define limit switch.
- Q.18 Define Loop.
- Q.19 Expand P/I converter.
- Q.20 Write two applications of electric actuator.

SECTION-C

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

- Q.21 Write a short note on UI/P converter.
- Q.22 Write different process variable and their units.
- Q.23 Write two advantages of proportional control mode.
- Q.24 Describe measurement lag and transmission lag.
- Q.25 Explain derivative control mode with diagram.
- Q.26 Describe the concept of on-off control mode.
- Q.27 Write a short note on auto transformer.

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