Q.28 Explain the concept of interlocking circuit

Q.29 Explain single loop temperature control system

Q.30 Explain P+I control mode

Q.31 Write about basics of process control

Q.32 Explain flapper nozzle system

Q.33 Explain the concept of process lag

Q.34 Explain with an example pressure switch

Q.35 Write a short note on diaphragm operated control valve

SECTION-D

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

Q.36 Define Actuators. Explain pneumatic actuator with example

Q.37 Explain principle of operation and constructional details of solenoid valve

Q.38 Explain PID control mode. Also write its merits and demerits

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SECTION-A

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

Q.1 Temperature switches are also called as

a) Thermostat b) Relay switch

c) Thermistor d) RTD

Q.2 Total windings in autotransformer are

a) One b) Two

c) Three d) None of these

Q.3 Set of operations performed in a sequential manner to get desired output is known as

a) Valve b) Transmitter

c) Actuator d) Process

Q.4 In automatic control system

a) Feedback is absent

b) Feedback is present

c) Feedback sometimes occur

d) None of these

Q.5 On-Off Control is _____ types of controller mode

a) Discontinuous b) Continuous

c) Special d) Open loop

Q.6 Offset problem mainly occurs in

a) Integral control b) Derivative control

c) Proportional control d) On-Off control

Q.7 In a PID control, D stands for

a) Derivative b) Delay

c) Degree d) Dead time

Q.8 Flapper Nozzle system converts the pressure to _____ motion and vice versa

a) Digital b) Mechanical

c) Analog d) None of these

Q.9 Flow switches normally open or closed when a predetermined flow is

a) Open b) Closed

c) Reached d) None of these

Q.10 Which of the following systems generate more energy when used in industrial applications ?

a) Pneumatic systems

b) Hydraulic systems

c) Both systems generate same energy

d) Cannot say

SECTION-B

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

Q.11 Write two advantages of integral control mode

Q.12 Define magnetic amplifier

Q.13 Define lag

Q.14 Write two uses of auto transformer

Q.15 Draw symbol of pressure switch

Q.16 Write two advantages of hydraulic control system

Q.17 Tell two applications of Ball valve

Q.18 Write two units of temperature

Q.19 Define pneumatic relay

Q.20 Write two types of controller mode

SECTION-C

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

Q.21 Explain ON-OFF control with the help of diagram

Q.22 Write a short note on proportional control mode

Q.23 Write five applications of limit switch

Q.24 Tell five differences between pneumatic and Hydraulic control system

Q.25 Explain the principle of operation of butterfly valve

Q.26 Write a short note on electric actuator

Q.27 Explain the working of flow switch with diagram.