

- Q.27 Comparisons between Hydraulic & pneumatic actuator.
 - Q.28 Write a short note on flapper nozzle system as a control system.
 - Q.29 Expand PI Converter.
 - Q.30 What is control valve and explain any one of the control valve.
 - Q.31 Short note on solenoid valve.
 - Q.32 What are the switches used in control system & explain temp switches.
 - Q.33 Short note on Butterfly valve.
 - Q.34 Differentiate b/w flow switch & pressure switches.
 - 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 PID controller & write down the advantages & disadvantages.

Q.37 Attempt any two:-

 - Auto transformer
 - Limit switches
 - Electric actuator

Q.38 Principle & construction of diaphragm operated value.

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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 In integral control mode :-

 - a) Offset Maximum b) offset zero
 - c) Offset Minimum d) No change

Q.2 A controller is take input as:

 - a) Input Signal b) Physical Signal
 - c) Error signal d) All of these

Q.3 In a PID control 'D' stands for:-

 - a) Derivative b) Delay
 - c) Degree d) All of these

Q.4 Which of the following is not a unit of temperature:-

 - a) Kelvin b) Celsius
 - c) Newton d) Ferhanite

Q.5 Which of the following is the dynamic characteristics of an instrument:-

- a) Sensitivity
- b) Reproductively
- c) Fidelity
- d) Dead Zone

Q.6 What is the standard current value in I/P converter :-

- a) 4-20 mA
- b) 0-20 mA
- c) 4-16 mA
- d) 0-16 mA

Q.7 Actuators are works as:-

- a) Final Control Elements
- b) Relay
- c) Pneumatic Actuator
- d) Hydraulic actuator

Q.8 In an automatic control system:-

- a) Feedback is absent
- b) Feedback is present
- c) Both of these
- d) None of these

Q.9 Propotional controller act as:-

- a) On-Off control
- b) Offset is present
- c) Both of these
- d) None of these

Q.10 Derivative controller is also known as .

- a) Rate Controller
- b) Reset Controller
- c) Both of these
- d) None of these

SECTION-B

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

Q.11 SI unit of Pressure.

Q.12 Write down 2 merits of Integral controller.

Q.13 What is ampledyne.

Q.14 What are the pneumatic actuator.

Q.15 Write down any two process variables.

Q.16 Expand DCS.

Q.17 Define Switch.

Q.18 Define Precision.

Q.19 What is measurement lag.

Q.20 PD stands for

SECTION-C

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

Q.21 Draw & Explain the single loop temp. control system

Q.22 Describe process & what are the main process variable in a process.

Q.23 Define process lag with an example.

Q.24 Give brief idea about ON-OFF controller & advantages also.

Q.25 What is controllers & describe PI controller.

Q.26 Describe I/P converter.