

Section-D

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

- Q.36 Explain PID Controller with its merits and demerits also.
- Q.37 Explain the principle and constructed details of Diaphragm operated valve.
- Q.38 Explain the principle and construction of magnetic amplifier.

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Roll No.

**5th Sem., Branch : IC, EI
Subject : Process Control**

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

- Q.1 A Transducer convert:
- a) One form of energy to another form.
 - b) Analog to Digital Signal
 - c) Digital to Analog signal
 - d) All of these
- Q.2 What is the 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 P1 stands for :-
- a) Propositional Integral
 - b) Propositional Initial
 - c) Positional Initial
 - d) Positional Integral

- Q.5 In integral control mode:-
 a) Offset Maximum b) Offset Zero
 c) Offset Minimum d) No change
- Q.6 A controller is take input as :-
 a) Input Signal b) Physical Signal
 c) Error Signal d) None of these
- Q.7 In a PID control "D" stands for :-
 a) Derivative b) Delay
 c) Degree d) All of these
- Q.8 Which of the following is not a unit of temperature:-
 a) Kelvin b) Celsius
 c) Newton d) Ferhanite
- Q.9 In an automatic control system:-
 a) Feedback is absent b) Feedback is present
 c) Both of these d) None of these
- Q.10 Propositional controller act as :-
 a) On-off control b) Offset is present
 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 Force.
- Q.12 Write down 2 merits of derivative controller.
- Q.13 What is actuators?
- Q.14 What are the Hydraulics actuator.
- Q.15 Write down any two process variables.
- Q.16 Expand DCS.

- Q.17 Define Switch.
- Q.18 Define accuracy.
- Q.19 What is measurement lag.
- Q.20 PD stands for which controller.

Section-C

- Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)**
- Q.21 Define process & what are the main process variable in a process.
- Q.22 Give brief idea about ON-OFF controller & advantages also.
- Q.23 What is controller & describe PI controller.
- Q.24 Describe autotransformer.
- Q.25 Comparisons between Hydraulic & Pneumatic actuator.
- Q.26 Write a short note on flapper nozzle systems as a control system.
- Q.27 Explain about P/I converter.
- Q.28 What is control valve and explain any one of the control valves.
- Q.29 Short note on solenoid valve.
- Q.30 Names the different switches used in the control system & explain temp switch.
- Q.31 Write a short note on Butterfly valve.
- Q.32 Differentiate b/w flow switch & pressure switches.
- Q.33 Describe proportional controller in a control system.
- Q.34 Draw & Explain the single loop temp. control system.
- Q.35 Define Interlocking in control switches.