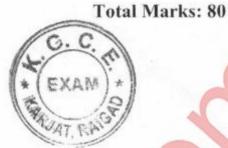
Duration: 03 Hrs.

Note:

Q. No 1 is compulsory

Attempt any THREE questions from Q No 2 to Q No 6.



Q.1) Attempt Any Five

20 M

- a. Explain with Example Process Lag and Distance Velocity Lag.
- b. Why Pneumatic instrumentation is preferred in processing plants?
- c. Explain Dead Time process & Smith predictor compensator.
- d. State significance of process control actions.
- e. Compare Feed forward Vs. Feedback control system
- f. Explain in brief Relative gain analysis.

Q. No 2)

a. Explain With a neat sketch working of pneumatic PID controller.

10 M

b. Explain Dynamic Elements and inverse response behavior of a process

10 M

control Loop.

Q. No 3)

a. What is Controller? Give classification & explain working of ON OFF

10 M

controller. State drawbacks of the same.

b. Explain with suitable example Split Range Control scheme.

10 M

Q. No 4)

a. Explain Block Diagram Analysis for MIMO system.

10 M

b. Explain Dynamic behavior of Second order interacting & Non interacting

10 M

systems.

Q. No 5)

a. Why Tuning is required? Explain process reaction curve method.

10 M

b. Explain with a suitable Example cascade control scheme.

10 M

Q. No 6 Write Short Notes on (Any Four)

20 M

a. Relay based Tuning.

b. Reset wind up.

c. Override control.

d. Self Regulation & Non self-Regulation characteristic.

e. Gain Margin and Phase Margin.