



C16-AEI-402

6415

BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER—2020
DAEI—FOURTH SEMESTER EXAMINATION
PROCESS CONTROL

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define process.
2. Define self-regulation.
3. Define proportional band.
4. State the need for tuning of PID controllers.
5. State the need for pressure to electric converters.
6. Draw the diagram of sliding stem single seat plug control valve.
7. Write the principle of Pneumatic Actuator.
8. Define adaptive control.
9. Define independent single variable control system.
10. Draw the symbols for pressure transmitter, flow transmitter and level transmitters.

PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. Explain batch process and continuous process.
12. Explain the process reaction curve method for tuning of PID controllers.
13. Explain the two positions and multi position control modes with diagram.
14. Explain the principle of operation of electric to pressure converter with diagram.
15. Explain the stepper motor actuator with diagram.
16. Explain the block diagram of feed forward control system with diagram.
17. Explain the block diagram of cascade control system with diagram.
18. Explain ISI and ANSI standards used in instrumentation.
