



C16-AEI-402

6415

BOARD DIPLOMA EXAMINATION, (C-16)  
JANUARY/FEBRUARY—2022  
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 control.
2. List the composite control modes.
3. Define integral control mode.
4. Define error and cycling.
5. Write the principle of final control operation.
6. Write the principle electro-pneumatic actuator.
7. Draw the diagram of rotating shaft control valve.
8. List any three applications of adaptive control system.
9. Define single variable control system.
10. Draw the symbols for fluid pressure line, electric signal and pneumatic signal.

/6415

1

[ Contd...

\*

\*

## PART—B

10×5=50

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

11. Explain the block diagram of process control loop with diagram.
12. Explain the derivative control mode with diagram and list its characteristics.
13. Explain multiposition and floating control modes with diagram.
14. Explain the basic principle of Nozzle Flapper system with a diagram.
15. Explain the constructional details of control valve with diagram.
16. Explain programmed adaptive control system with block diagram.
17. Explain the operation of ratio control system with diagram.
18. Explain BS and ISA standards used in instrumentation.

★ ★ ★

\*

\*