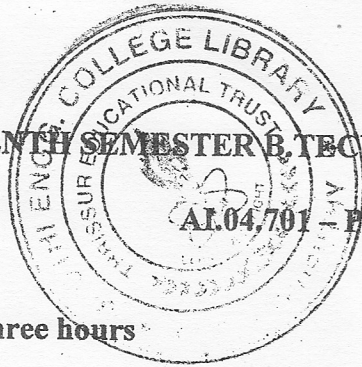


23184



Name:

Reg. No.

SEVENTH SEMESTER B.TECH. DEGREE EXAMINATION, DECEMBER 2011

**AI.04.701 - Process Control Instrumentation
(2004 Admissions)**

Time: Three hours

Maximum : 100 marks

- I) a) Briefly discuss about process control.
- b) Write short notes on batch processes and continuous processes.
- c) Briefly explain the conversion of analog electrical signals into digital electrical signals.
- d) Write short notes on Pneumatic systems.
- e) Briefly explain the principles of any two methods of reducing control valve noise.
- f) Explain about inferential control.
- g) Explain the significance of step testing.
- h) Explain the relationship between Laplace and frequency domain.

(8 x 5 marks = 40 marks)

- II) a) Explain all heat exchanger and two tank liquid level systems.

Or

- b) Write notes on i) degrees of freedom ii) interactive and non-interactive systems.

- III) a) Explain i) pressure control valves ii) P/I converters,

Or

- b) i) Explain different types of relays ii) Briefly explain the principles of hydraulic pumps.

- IV) a) Explain the different types of control valves.

Or

- b) Explain on any three advanced control strategies.

- V) a) i) Explain about the response of multi-loop control systems ii) Write notes on pulse testing.

Or

- b) Explain on the stability of multivariable systems.

(4 x 15 marks = 60 marks)