Code: R7311306



B.Tech III Year I Semester (R07) Supplementary Examinations, May 2013

## PROCESS CONTROL (Electronics & Control Engineering)

Time: 3 hours

## Answer any FIVE questions All questions carry equal marks

Max Marks: 80

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- 1 (a) Explain in detail about the batch process and continuous process with examples.
  - (b) Discuss the significance of a mathematical model of process with suitable example.
- 2 (a) Distinguish briefly between multi-position controller mode and floating controller mode with neat sketches.
  - (b) Explain the characteristics of basic conventional controllers.
- 3 (a) Discuss about the ramp response of any one of first order-measuring elements.
  - (b) Briefly explain about the few liquid level measuring instruments.
- 4 (a) Explain about the theory of automatic controller circuits.
  - (b) Discuss about the hydraulic integral controller with neat sketch.
- 5 (a) Explain in detail about the different types of sliding steam control values.
  - (b) What is a ratio control system? Discuss such system with a specific process.
- 6 (a) Explain about the implementing control system for boiler drum level control.
  - (b) Discuss briefly about the heat exchangers.
- 7 What are the different factors to be considered in improving conversion in the chemical reactors? Explain them in detail.
- 8 Write short notes on the following:
  - (a) Relative gain analysis.
  - (b) Barometric condensers.
  - (c) Multiple-effect evaporation.

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