Code: R7311306

R7

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

PROCESS CONTROL
(Electronics & Control Engineering)

Time: 3 hours   Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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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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