Code No. 3166

FACULTY OF INFORMATICS

B.E. 4/4 (IT) I – Semester (Main) Examination, December 2010

Subject : Digital Instrumentation & Control (Elective – II)

Time : 3 Hours Max.Marks: 75

Note: Answer all questions from Part – A. Answer any Five questions from Part – B.

PART – A (10x2.5 = 25 Marks)

1.	Illustrate response of a system.	2
2.	What is signal conditioning? Explain briefly.	3
3.	Differentiate resolution and accuracy of measuring device.	3
4.	Describe the working principle of flow sensors.	2
5.	List process characteristics and explain briefly.	2
6.	What is seeback effect and where it will be used?	3
7.	What is discrete state process? Give an example.	3
8.	Define proportional derivative control.	2
9.	Mention the characteristics of a controller.	2
10.	Define stability and give an example.	3

PART – B (5x10 = 50 Marks)

11.(a)	Explain the operation of D/A conversion.	5
(b)	Draw the block diagram and explain the elements of a process control system.	5
12.(a)	What is final control operation? Explain various control elements.	5
(b)	Explain the characteristics of solid state temperature sensors.	5
13.	Write detailed notes on electric actuators and hydraulic actuators.	10
14.	Explain a digital control system in detail.	10
15.(a)	Describe the behaviour of a PID controller.	5
(b)	Explain different inter locking systems in Discrete Control System.	5
16.	What is a control loop? Discuss about the multivariable control system.	10
17.	Write short notes on the following: a) Analog and Digital Controllers b) Ladder diagram	5 5