

Roll No .....

## MEIC - 103

M.E./M.Tech., I Semester

Examination, June 2016

### Discrete Data And Non Linear Control

Time : Three Hours

Maximum Marks : 70

- Note :** i) Attempt any five questions.  
ii) All questions carry equal marks.  
iii) Assume suitable data wherever necessary.

1. a) Explain reconstruction of sampled data system. 7  
b) Explain frequency response analysis of sampled data system. 7
2. a) Explain optimization of digital controllers. 7  
b) Discuss multirate and sampling. 7
3. a) Discuss classification of non linear phenomenon. 7  
b) Discuss point Transformation method. 7
4. a) Discuss various methods of stability. 7  
b) Explain popov's stability criterion. 7

5. a) Explain modified transformation. 7  
b) Explain Time response analysis of sampled data system. 7
6. Explain Design of digital controllers, with the help of a suitable data. 14
7. a) Explain Linearization, Harmonic, Piecewise point transformation method. 7  
b) Explain Zubov's method of stability. 7
8. Write short notes on any two: 14
  - a) Compensation of sampled data system
  - b) Phase plane method
  - c) Canonical form of Lure

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