Reg. No. : | | | | | | | | | | |

Question Paper Code: 55018

Ph D.COURSE WORK EXAMINATION, MAY 2018

Elective

Course Work

15PPE518 - NONLINEAR DYNAMICS OF POWER ELECTRONIC CIRCUITS

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1. (a) Explain in detail about the Vector Fields of Linear, Linearized and Non linear System (20)

Or

(b) Write short notes on

(i) Chaos

(ii) Poincare Map (20)

2. (a) Write about the analysis method based on transient simulator. (20)

Or

(b) Explain in detail about Bifurcation Diagram Requirements and Implementation? (20)

3. (a) Describe in detail about border collision bifurcations in the current mode controlled boost converter. (20)

Or

(b) Explain the operation of Cuk converter with discrete time modeling. (20)

4. (a) Explain in detail about current controlled DC drives? (20)

Or

(b) Explain the non linear phenomenon in PMSM drives. (20)

5. (a) What is OGY and explain it in detail? (20)

Or

(b) Explain in detail about Hysteresis control. (20)