E   Reg. No. :

Question Paper Code: 55T24

Ph.D COURSE WORK DEGREE EXAMINATION, APRIL 2019

Elective

Course work

15PPE524 - OPTIMIZATION TECHNIQUES IN POWER ELECTRONICS

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Write short notes on the   CO1- U   (20)

    (i)   Fitness Evaluation

    (ii)   Constraint handling techniques

Or

   (b) Explain multivariable optimization with equality constraints with   CO1- U   (20)
example.

2. (a) With example discuss principle of simple genetic algorithm in   CO2- U   (20)
detail.

Or

   (b) Explain about direction based search –genetic operators-selection.   CO2- U   (20)

3. (a) Classify differential Evolution techniques and explain in detail.   CO3- U   (20)

Or

   (b) With example explain simplify particle Swarm optimization.   CO3- U   (20)

4. (a) Explain conventional approaches for MOOP. CO4- U (20)

Or

(b) Explain with example Multi objective dynamic neighborhood PSO. CO4- U (20)

5. (a) Apply optimization techniques to harmonic elimination in inverters. CO5- App (20)

Or

(b) Design a passive filter circuit using genetic algorithm. CO5- App (20)

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