Nature Inspired Computing Final Exam
(90 minutes – 20 points each)

Q1: Compare and contrast particle swarm optimization and ant colony optimization.

Q2: What problems you may encounter when you use a "roulette wheel selection" mechanism for selecting individuals for reproduction in a genetic algorithm? What can you offer to remedy these problems?

Q3: How should an effective "penalty function" be designed?

Q4: Describe 3 ways to hybridize a nature inspired heuristic.

Q5: What are the advantages of using an evolutionary algorithm for multiobjective optimization?