

# Part 1 Tutorial

1. Why are genetic algorithms considered to be bio-inspired?
2. What are genetic algorithms (GA) user for? Give an example of what you might use a GA for?
3. Describe the main steps in a GA. Show the steps in a flowchart.
4. What are the purposes of the following in a GA?
  - Evaluation or fitness function
  - Mutation operation
  - Selection operation
  - Crossover operation
5. Suppose you have to find the maximum turning point of a function  $y = f(x)$ . You are given that the x-value of the point lies in the interval  $[x1, x2]$  and the y-value of the point lies in the interval  $[y1, y2]$ . Design a GA that can solve it. In your design, include the type of chromosome and selection method etc. that would be appropriate and suggest values for settings where required.