5. Describe several mutation methods used in a GA.

Gaussian mutation. Shuffle indices. Flip bit.

6. What are some of the crossover methods?

One point crossover. Two points crossover. Uniform crossover. Ordered crossover.

7. Provide examples of several selection methods.

Proportional selection scheme. Tournament selection scheme (only cares order).

8. What is a chromosome? Comment on its makeup.

In genetic algorithms, a chromosome (also sometimes called a genotype) is a set of parameters which define a proposed solution to the problem that the genetic algorithm is trying to solve.

9. If the rate of mutation is increased too much, how might it affect the search? What might happen to the search it the mutation rate is decreased too much?

Mutation rate being too high: Risks of not being able to converge. Mutation rate being too low: not enough exploration of better solutions. Risk of getting stuck at local optima (premature).