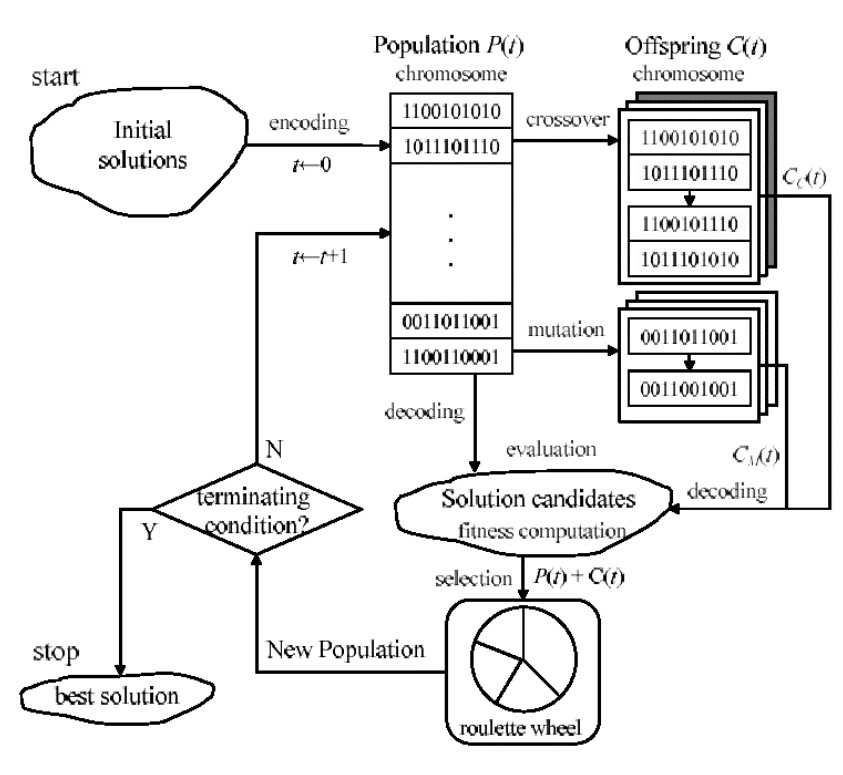
Answer the following questions using your own words and by writing complete sentences.

**Questions:**

1. Compare and contrast Expert Systems Applications with Conventional systems applications. (5 marks)
2. Discuss in detail the process steps involved in developing an expert system. (5 marks)
3. Study the Genetic Algorithm structure diagram below. What roles are played by the *crossove*r operator and the *mutator.* Make sure to mention how the next generation (offspring) is affected, (5 marks)



1. An Expert System normally has an inference engine to help it make decisions. Using that as context, discuss the difference between forward and backward chaining. (5 marks)
2. Explain the case representation methods in the CBR process. (5 marks)
3. Discuss in detail the approaches to machine learning. Provide examples in your discussions (5 marks)
4. What are Speech Recognition Systems? What are the uses of SRSs? (3 marks)
5. Explain what situation exists in a case of reasoning with uncertainty. What approaches can be deployed? (2 marks)