**Qn 5**

**A tennis player has a probability of winning a tournament of 0.1. Assume that the probability of winning remain unchanged for each tournament.**

1. **What is the probability that he wins 5 tournament titles after playing 20 tournaments?**
2. **What is the probability that he wins the 5th tournament title at the 20th tournament he enters?**
3. **How many matches is he expected to play before winning 5 tournaments?**

**Qn 6**

**A buyer of components buys them in lots of size 100. It is his policy to inspect 3 components randomly from a lot and to accept the lot only if all 3 are non-defective. Suppose the manufacturing process has some systematic error such that in every lot, there is 1 defective component, what proportion of lots does the buyer reject?**