Introductory Organic Chemistry
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Lecture – 38
Learning Objectives for Week -7

Hello, today we will go over the Learning Objectives of Week – 7. Week 7 is dedicated to two different kinds of reactions- substitution reactions and elimination reactions. So, far most commonly we have seen the addition reactions, where something gets added on a carbon-carbon double bond or a carbon-carbon triple bond. Now what we are going to do is we are going to go over substitution.

So, things will get substituted or elimination reactions where the things get eliminated from a particular chemical reaction. Now, the main learning objectives of week 7 are firstly, we should be able to draw the correct arrow pushing mechanisms.

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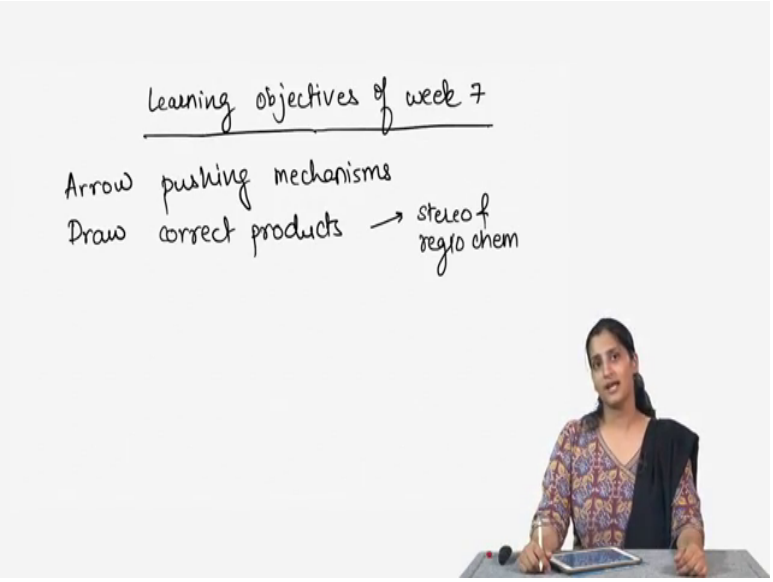

So, the first learning objective is to draw correct arrow pushing mechanisms, for substitution and elimination reactions; also we should be able to get to the correct products while paying attention to the stereochemistry as well as the regiochemistry of the product formation. So, we have to pay attention to what the mechanism is and then we should be able to draw the correct products and not just the product, but it should be correct with respect to the stereo and regio chemistry.

The third thing is now we want to start connecting the dots, right. So, we have seen how alkenes react or how alkynes react. In this chapter especially with the elimination reactions we are going to learn how to create alkenes or alkynes. I know we have seen one of the reactions in the last week, but also like now you will get to know the elimination reactions in much more detail. So, now, you have a way to create the alkenes or the alkynes and now these alkenes and alkynes we have seen their reactions.

So, now, we are kind of connecting the dot and building our synthetic tree to go from one functional group to another, okay. The fourth and the more important point that I want you to pay attention to is how does the structure or the conformation of the compound plays an effect in determining the structure of the product. So, this is going back to the second chapter where we looked at let's say Newman projections or we looked at the chair conformations for cyclohexane derivatives.

How do these affect the product and the product formation is what we are going to study in this chapter. So, when you are looking at the mechanism or being able to correctly draw the product please pay attention to the fact that we need to be able to correlate these things and study the relationship between the conformation and the product formation. So, with that let's begin the journey in Substitution and Elimination reactions; this is one of the topics that gets tricky because as we will learn in this chapter substitution and elimination reactions kind of compete with each other.

So, there could be a substitution reaction, favoured in some cases versus elimination reaction being favoured in some cases and what we have to really develop is a sense of which reaction is favoured, substitution or elimination. So, pay attention as we go through the characteristics of each reactions because various conditions will favour a particular type of reaction. So, that is going to be something tricky and something that we need to pay close attention to as we are doing this chapter. So, let's begin Substitution and Elimination.