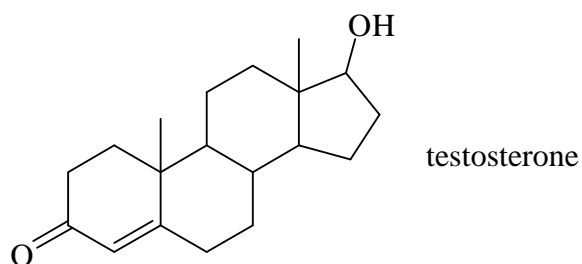


The structure of testosterone, an important male hormone, is shown below.



**Marks**  
**8**

Give the molecular formula of testosterone.

Identify the functional groups present in testosterone.

How many stereogenic (chiral) centres are there in testosterone?

Draw the constitutional formula of the product formed when testosterone is treated with the following reagents.

excess methanol / HCl	$\text{LiAlH}_4$ in dry ether; then $\text{H}^+ / \text{H}_2\text{O}$
concentrated $\text{H}_2\text{SO}_4$ / heat	$\text{H}_2$ / Pd catalyst