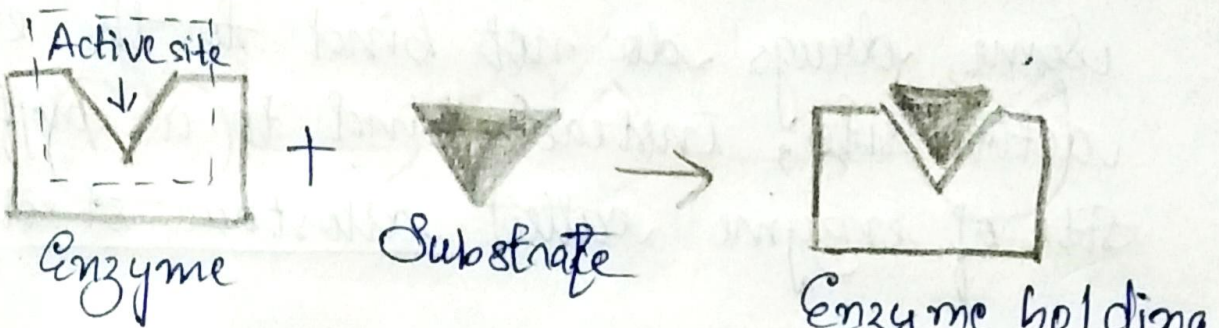
Concepts

* 1. Functions of enzymes :-

i) Enzyme have to hold the substrate for a chemical reaction.



Note * Substrates bind to the active site of the enzyme interaction by

ionic bonding, hydrogen bonding, Vanderwalls or dipole-dipole interaction.

ii) Enzyme is to provide functional groups, that will attack the substrate and carry out chemical reactions.

2. Drug-enzyme interaction:-

Drug can inhibit attachment of substrate on active site of enzymes in following ways.

a) Competitive inhibition:-

Drugs which compete with the natural substrate for their attachment on the active sites of enzymes.

b) Non-Competitive inhibition/ ~~Allosteric site~~:-

Some drugs do not bind to the enzyme's active site, instead bind to a different site of enzyme called allosteric site.

3) Receptors as Drug Targets:-

* Receptors:- which are vital for communication system in the body are called receptors.
  - Location:- Embedded in cell's membrane.

* Antagonists:- Drugs that bind to the receptor site and inhibit its natural function.
  - Useful when blocking of message is required

* Agonists:- Drugs that mimic the natural messenger by switching on the receptor.
  - Useful when there is lack of natural chemical messenger.