

* CATALYST AND CATALYSIS :->

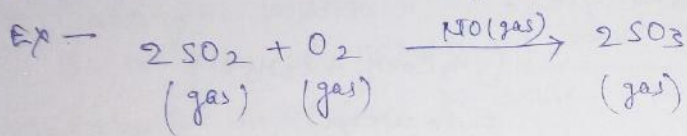
The chemical substance which can alter the rate of chemical rxn - known as catalyst.

Any chemical rxn which proceed through in the present of catalyst known as catalyses.

TYPES OF CATALYSES =>

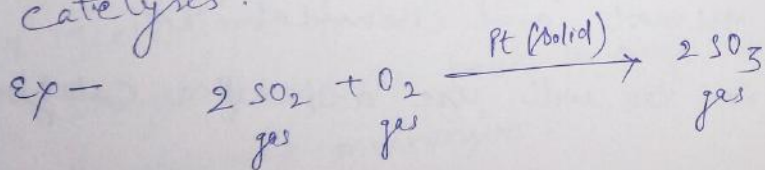
1- ON THE BASIS OF PHYSICAL STATE =>

(i) - HOMOGENEOUS CATALYSES => if the physical state of the reactant and catalyst are same the rxn is known as Homogeneous Catalyses.

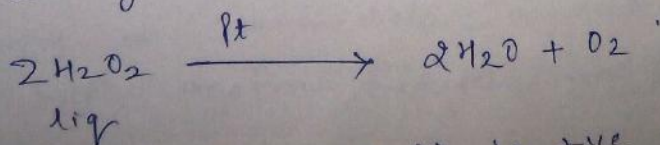


(ii) - HETEROGENEOUS CATALYSES =>

Such type of chemical rxn in which reactant and catalyst are in different physical state known as heterogeneous catalyses.

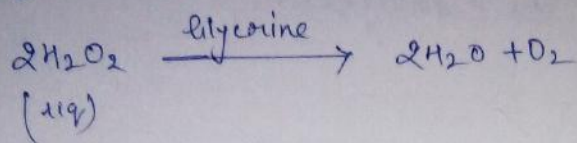


* ON THE BASIS OF NATURE OF CATALYSES (Types of catalyse)
When any catalyst increase the rate of rxn, known as positive catalyst. and its chemical rxn is known as +ve catalyses.



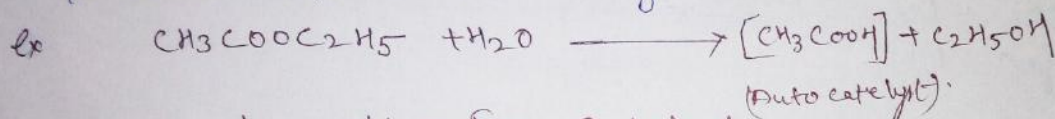
It is +ve catalyst.

(-ve) Catalyses \Rightarrow When any catalyst decrease the rate of chemical rxn known as -ve catalyst and the process is -ve Catalyses.



* Auto Catalyses \Rightarrow

In a certain rxn one of the product act as a catalyst known as Auto catalyst and the process is known as Auto Catalyses.



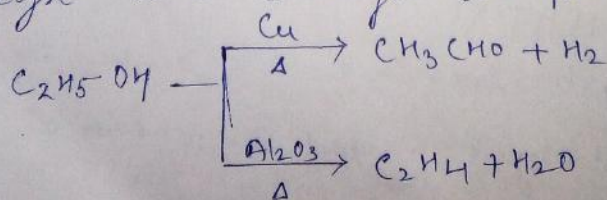
* Corrector Stick For Catalyst.

(1) A catalyst remains unchange in mass and chemical composition at the end of the rxn.

(2) A small quantity of catalyst is generally sufficient to catalyze any almost any chemical rxn.

(3) for any chemical rxn we will use a specific catalyst.

(4) A catalyst can change the product

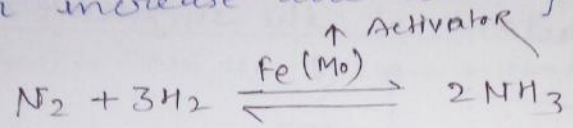


incomplete rxn

⑤ A catalyst can not change the equilibrium value but it can achieve the equilibrium state in shorter and longer time.

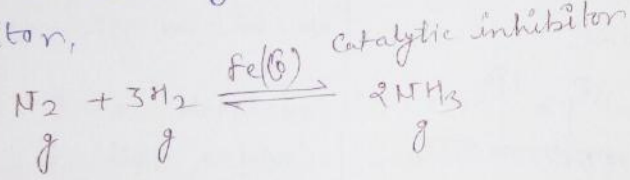
⑥ * Catalytic promoter → (activator)

Such type of chemical substance with its self not a catalyst but when be introduced in chemical reaction it can increase the activity of catalyst.



Catalytic poison →

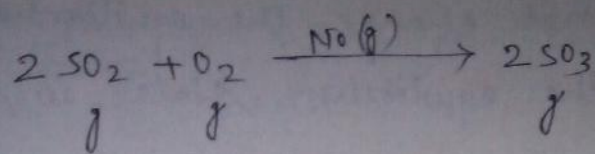
Such type of chemical substance which it self not a catalyst but can decrease the activity of the catalyst known as catalytic poison, which is also known as catalytic inhibitor.



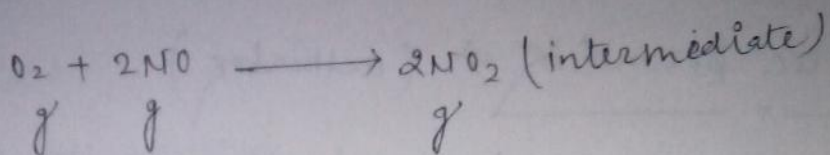
Mechanism of Catalyst :-

Catalyst can take part in any chemical rxn by the help of following mechanism -

- 1) Intermediate Compound formation Mechanism
- 2) Adsorption Mechanism
- 1) Intermediate Compound formation Mechanism? -
In this method catalyst rxn with one of the reactant and form an intermediate compound which further react with another reactant and form product -



STEP-1

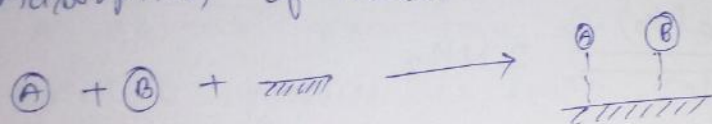


STEP-2

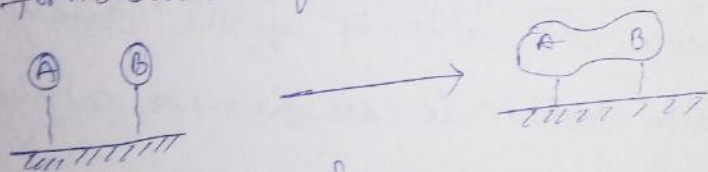


* Adsorption Mechanism →

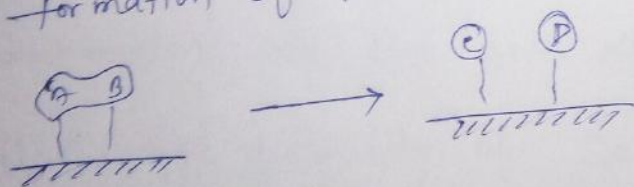
① Adsorption of reactant at the surface of Catalyst



② formation of activated complex -



③ formation of product -



④ desorption -

