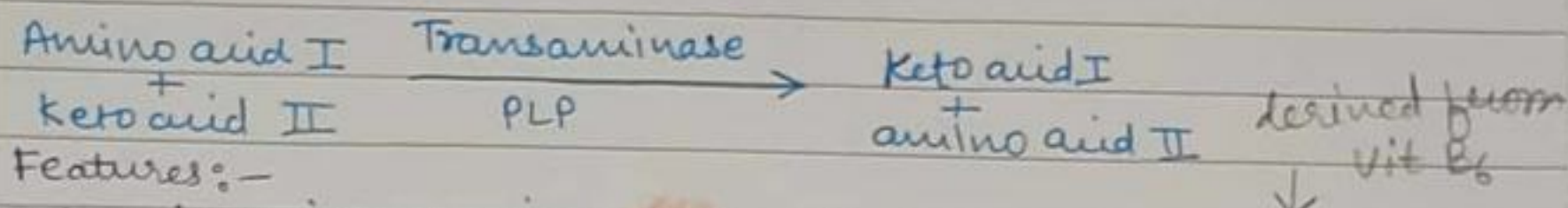


Topic

TRANSAMINATION RXN

Date

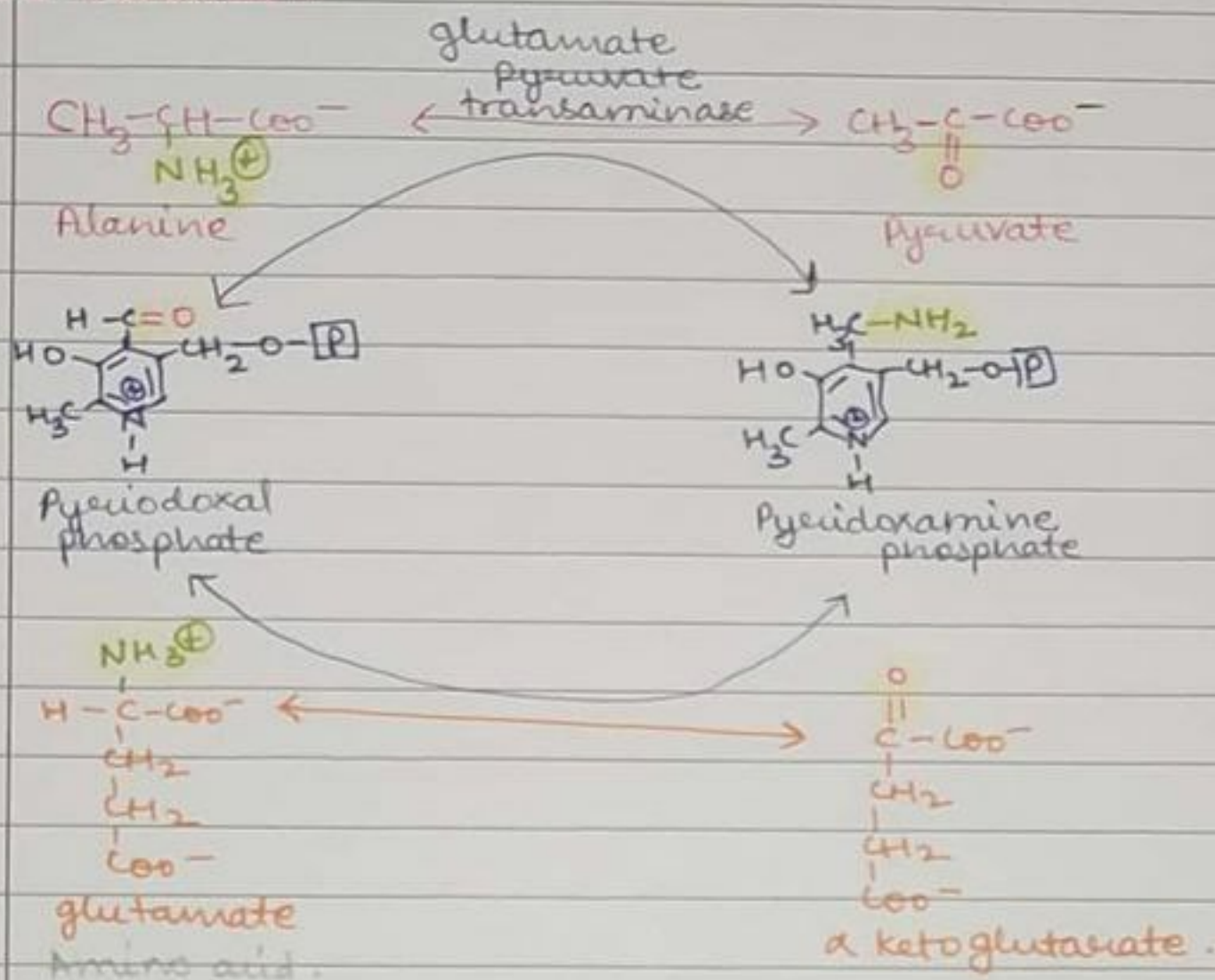
- transfer of amino group ($-NH_2$) from amino acid to keto acid.



Features:-

- all amino acids requires **PLP** (pyridoxal phosphate) coenzyme.
- **No free NH_3** is liberated.
- Reversible rxn.
- involves both **catabolism** and **anabolism** of amino acids.
- lysine, threonine, proline, hydroxyproline $\rightarrow$ no transamination.
- serum transaminase $\rightarrow$ imp for diagnostic + prognostic purpose.
- Synthesis of **Non-essential** amino acids.

Mechanism



Examples of Transaminase enzymes

Liver Marker

ALT

AST

Cardiac Marker

AST

∴ ALT $\rightarrow$ Alanine transaminase

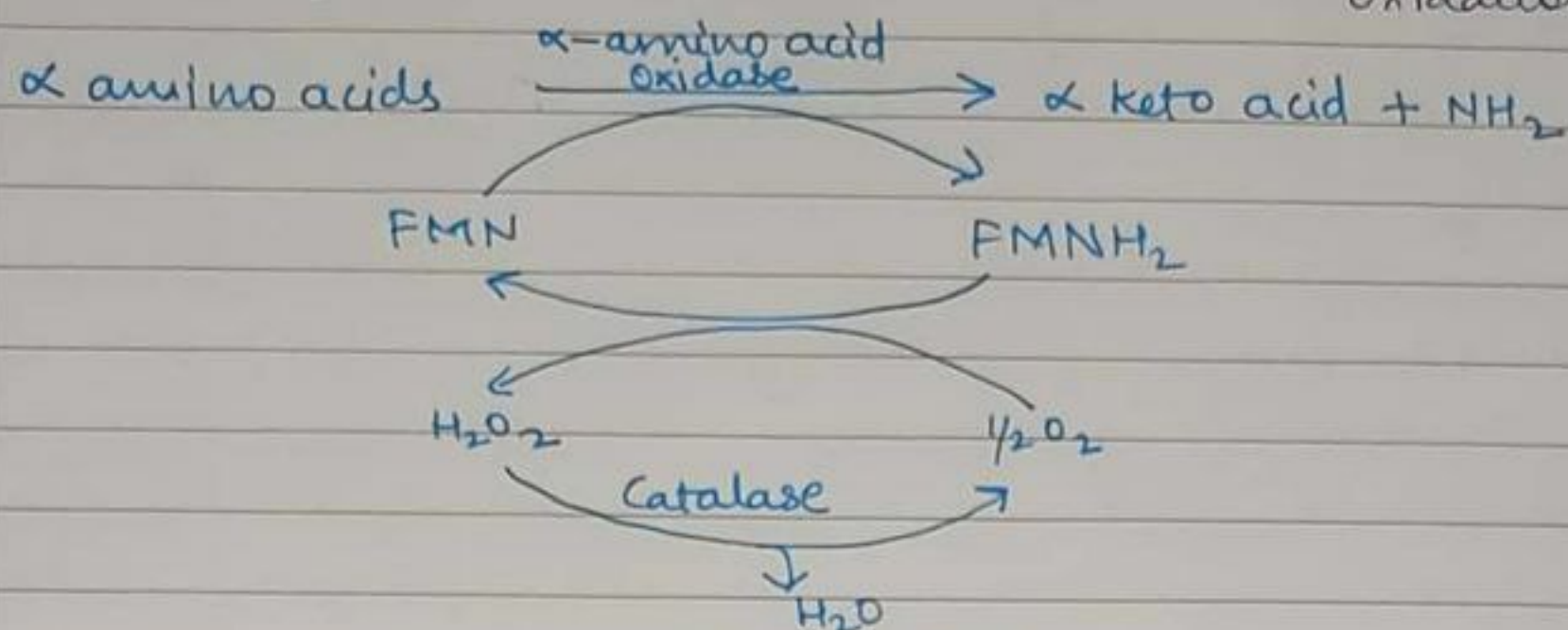
AST $\rightarrow$ Aspartate transaminase.

Topic **DEAMINATION RXN** ^{⊕ liver + kidney}

Date

Oxidative

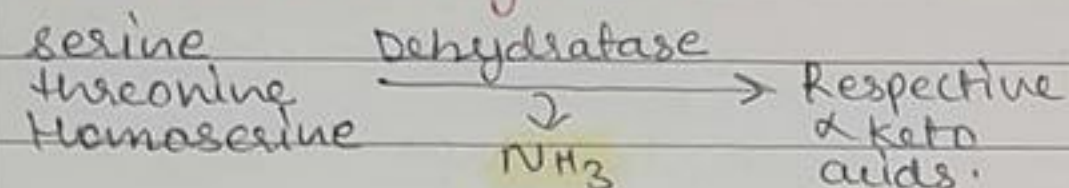
- Removal of amino group ($-NH_2$) from amino acids with oxidation.



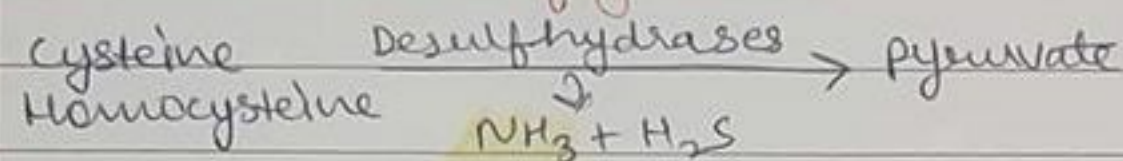
- liberation of NH_2 for urea synthesis.
- transamination, Deamination occurs simultaneously (glutamate act as intermediate molecule).

Non-oxidative - Removal of amino group ($-NH_2$) from amino acids without oxidation.

a) Amino acid dehydratases.



b) Amino acid desulfhydratases.



c) Deamination of histidine

