**5. B) COMMON ORGANIC REACTIONS IN DRUG SYNTHESIS**

**Assignment**

Find and present two drug molecules — one that involves hydrolysis and another that involves esterification during its synthesis or metabolism. For each reaction (for each drug example), students should:

* Name of the drug and its therapeutic use.
* Chemical reaction involved (with chemical equations and reaction type labeled).
* Detailed explanation of the role of hydrolysis or esterification in its synthesis or activation.
* Reaction conditions (e.g., acid/base catalysis, temperature, solvent).
* Diagram of the reaction mechanism (optional but encouraged).
* Real-world significance: Why this reaction is important (e.g., improves bioavailability, controls release, prodrug activation).

**Purpose**: To understand and analyze the roles of hydrolysis and esterification in the synthesis and metabolism of pharmaceutical compounds.