

## CHO-453 DESIGNING ORGANIC SYNTHESIS & ASYMMETRIC SYNTHESIS

Item Text	Option Text 1	Option Text 2	Option Text 3	Option Text 4
Which of the following statements best describes retrosynthesis?	The reaction conditions required to convert the product of a reaction back to the original starting materials	A strategy used to design a synthesis of a target molecule by working back from the target to simple starting materials	The design of a synthetic scheme using cheap, traditional reagents, rather than expensive modern reagents	The design of reaction conditions such that an equilibrium reaction is pushed towards the products rather than the starting materials.
Which of the following statements best describes a synthon?	A synthetic reagent used in a reaction	A key intermediate in a reaction sequence	A transition state involved in a reaction mechanism	A hypothetical structure that would result in a given reaction if it existed
Which of the following statements best describes a disconnection in retrosynthesis?	A disconnection involves a theoretical disconnection of a bond in a target structure in order to identify simpler structures that could be linked through the formation of that bond	A disconnection involves identifying stages where a bond is split in the corresponding synthesis.	A disconnection identifies retrosynthetic stages which would not be feasible in the corresponding synthesis	A disconnection describes the reaction conditions required to split a target structure into simpler molecules.

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Which of the following (to be converted by functional group interconversion, FGI) is <b>not</b> a good alternative target for the synthesis of a primary amine, $\text{RCH}_2\text{NH}_2$ ?	$\text{RCH}_2\text{Cl}$	$\text{RCH}_2\text{OH}$	$\text{RCHO}$	$\text{RCN}$
Which of the following (to be converted by FGI) is <b>not</b> a good alternative target for the synthesis of a carboxylic acid, $\text{RCO}_2\text{H}$ ?	$\text{RCH}_2\text{OH}$	$\text{RCHO}$	$\text{RCOCH}_3$	$\text{RCN}$
Which of the following is used as a acylanion equivalent?	Nitroethane	Nitrene	Ether	Alkene
For the synthesis of 1,2-dicarbonyl compound which molecule is use to react with lithium salt	Acyl halide	Epoxide	Alkyl halide	unsaturated aldehyde
Enamines are	alpha, beta-unsaturated amine	alpha, beta-unsaturated aldehyde	alpha, beta-unsaturated ether	alpha, beta-unsaturated alkyl halide
For the preparation of enamine which amine is used?	Primary Amine	Secondary Amine	Tertiary Amine	Quaternary Amine
Reaction of ketone or aldehyde with primary amine gives	Imine	Enamine	Alkene	Alkyne
Which of the following amine is not use to synthesis of enamine?	Pyrolidine	Morpholine	Piperidine	Methyl amine
Enamines are	Nucleophile	Electrophile	Neutral	Radical
The phenomenon or process by which imine are converted into enamine is which of the following?	Imination	Enamination	Amination	Tautomerism
What is the name of the compound formed when alkylation of enamine is followed by hydrolysis?	Carboxylic Acid	Ketone	Amide	Ester
Which cyclic ketone enamine is most reactive?	Five Membered	Six Membered	Seven Membered	Eight Membered
F-moc chloride is use to protect the	Amine	Alcohol	Acid	Diol

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Which of the following is used to deprotect the silylethers	Mild base	Fluoride or TBAF	Hydrogenation	Acid
In Umpolung Chemistry which of the following intermediate is formed?	Carbene	Carbocation	Carbanion	Nitrene
Which of the following compound is obtained by the oxidation of primary alcohol with Nascent oxygen?	Alkanal	Alkanone	Ether	Amine
The reaction of carboxylic acid with alcohol catalysed by conc. H <sub>2</sub> SO <sub>4</sub> is called	Dehydration	Saponification	Esterification	Neutralization