

Important Organic Name Reactions List for IIT/NEET/ AIEEE

Alkanes –

Wurtz reaction / Wurtz Fittig reaction/ Fittig reaction

Soda-lime decarboxylation / Kolbe Electrolysis

Halogenation of alkanes

Use of HI / red P

Alkenes/Alkynes-

Saytzeff Rule/ Markownikoff Rule/ Kharasch or Peroxide Effect

Hoffmann Elimination of Quaternary Ammonium Hydroxides

Acid catalysed dehydration of alcohols

Oxymercuration-Demercuration of alkenes

Hydroboration Oxidation of alkenes

Ozonolysis (Reductive/Oxidative)

Tests of Terminal alkynes

Arenes–

Friedel-Crafts Acylation/ Friedel-Crafts Alkylation

Haloalkanes–

Finkelstein Reaction / Swarts Reaction

Hoffmann Ammonolysis of alkyl halides

Grignard Reactions

Dow's process

Alcohols/Phenols/Ethers–

Lucas Test

Reimer Tiemann reaction / Kolbe-Schmitt Reaction / Fries Rearrangement

Williamson Synthesis of ethers

Aldehydes/Ketones-

Etard Reaction

Aldol Condensation / Perkin reaction

Clemmensen Reduction / Wolff-Kishner Reduction

Tollen's test / Fehling test/ Benedict test / Schiff test / 2,4-DNP test (Brady's test)

Cannizaro reaction

Haloform Test

Carboxylic acids & Derivatives-

HVZ (Hell-Volhard-Zelinsky) Reaction

Hunsdiecker Reaction

Esterification/ Trans-Esterification/ Saponification

Rosenmund Reduction / Bouveault-Blanc Reduction;

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Hoffmann Bromamide Degradation of acid amides

Dry distillation of Calcium salts of carboxylic acids

Stephen Reduction

Amines-

Gabriel Phthalimide Synthesis of primary amines;

Carbyl Amine test of primary amines

Hinsberg Test

Diazotisation / Azo Coupling

Schotten-Baumann Reaction

Sandmeyer Reaction / Gattermann reaction / Balz Schiemann Reaction

Reactivity vs Selectivity in Halogenation of Alkanes

Use of NBS or SO_2Cl_2 (Wohl-Ziegler Reaction)

Corey House Synthesis / Ullmann reaction

Use of Lemieux reagent

Alkylation/Dimerisation of alkenes

Birch Reduction;

Simmons Smith Reaction

Diels-Alder Reaction

Wagner-Meerwein Rearrangement / Demajnov Rearrangement;

Ring contraction examples

Oxidation of Alkylbenzenes

Gattermann Koch Reaction

Gattermann Aldehyde Synthesis

Frankland Reaction

$\text{S}_{\text{N}}\text{i}$ / $\text{E}1\text{CB}$

Benzyne Mechanism/ Cine Substitution

Darzens Reaction/Glycidic Ester Condensation

Victor Meyer Test

Pinacol-Pinacolone Rearrangement

Use of Ceric ammonium nitrate in Test of Alcohols

Test of enols

Dienone Phenol Rearrangement

Reactions of Epoxides

Claisen-Schmidt Reaction

Jones reagent / Tilden Reagent / Gilmann reagent

Claisen Condensation / Dieckmann Condensation / Stobbe Condensation

Decarboxylation of beta-keto carboxylic acids

Acetoacetic Ester Synthesis of Ketones

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Malonic ester Synthesis of
Carboxylic acids

Baeyer-Villiger Oxidation of Ketones

Benzilic Acid Rearrangement /
Benzoin Condensation / Tischenko
reaction

Oppenauer oxidation / MPV
(Meerwein-Ponndorf-Verley)
Reduction;

Michael Addition

Reformatsky Reaction

Knoevenagel Condensation

Wittig Reaction

Favorskii Reaction/ Rearrangement

Arndt-Eistert Synthesis/ Curtius
Reaction / Schmidt reaction

Beckmann rearrangement / Wolff
Rearrangement

Liebermann nitroso-amine test of
secondary amines

Hoffmann Mustard Oil reaction

Stork Enamine Synthesis / Leuckart
Reaction

Cope Elimination / Ester Pyrolysis

Bridgehead Systems

Kinetic Isotope Effects

Vilsmeier-Haack Reaction

Reduction / Hydrolysis of Cyanides /
Isocyanides / Nitro Compounds

Reduction of Nitrobenzene in
different medium

Reducing Behavior of Formic Acid

///Acid-catalysed Aldol Condensation

Wacker process / Oxo process
(Hydroformylation)

Houben Hoesch Condensation
Reaction

Sommelet Reaction

Mulliken Barker Test