

VIDYAPEETH



BATCH CODE: 19-PJ301EA 2025

SUBJECT NAME: CHEMISTRY

CHAPTER NAME:

Organic chemistry IUPAC Nomenclature

ATDB.uno



Lecture No.

04

By – Swapnil Sir



Today's Goal

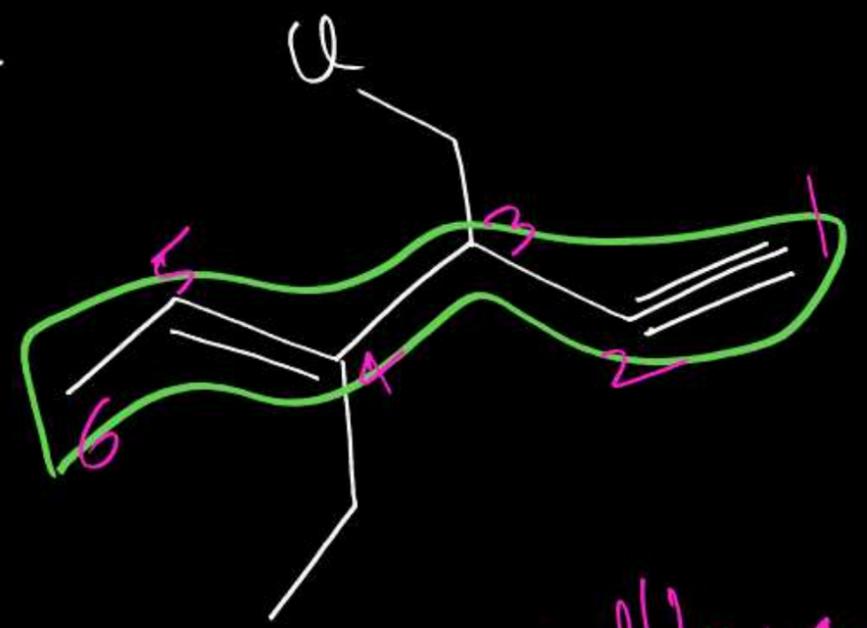
Subtopic

I.U.P.A.C. Nomenclature
{ Polyfunctional groups }

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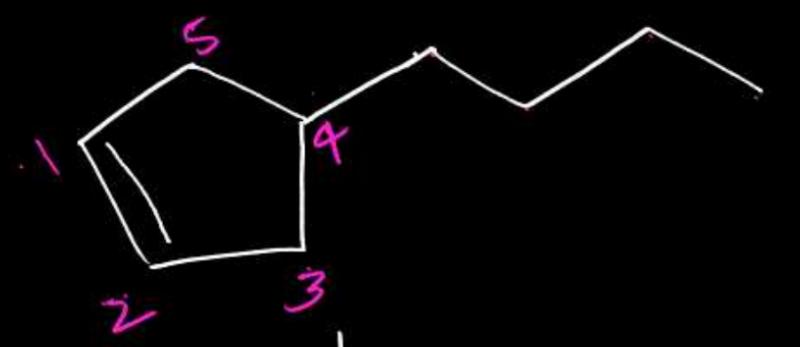


#



3-(chloromethyl)-4-ethylhex-4-ene-1-yne

4-n-butylcyclopent-1-ene

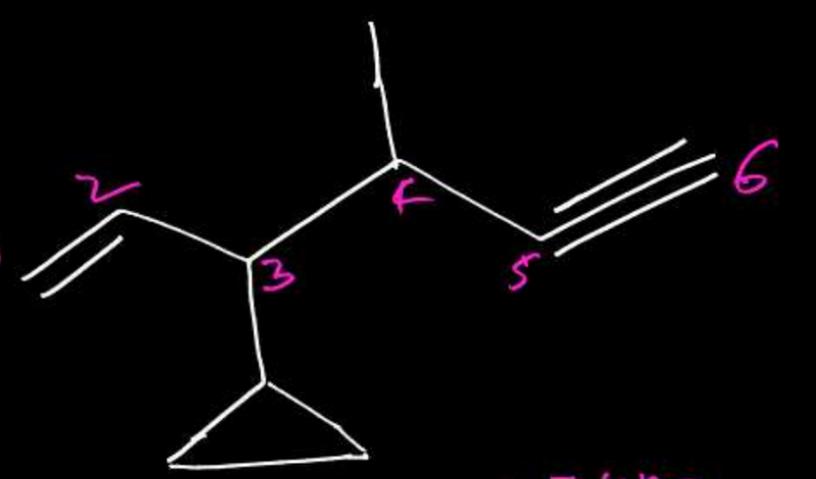


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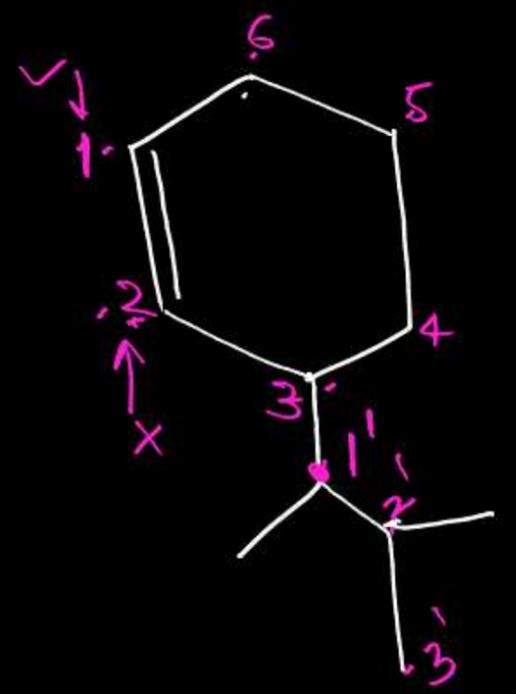
4-cyclopentyl-3-methylhex-1-ene

#



3-cyclopropyl-4-methylhex-1-ene-5-yne

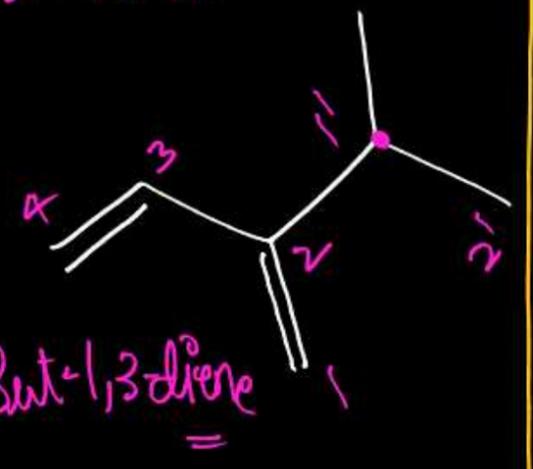
#



3-(1,2-dimethylpropyl)cyclohex-1-ene

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#

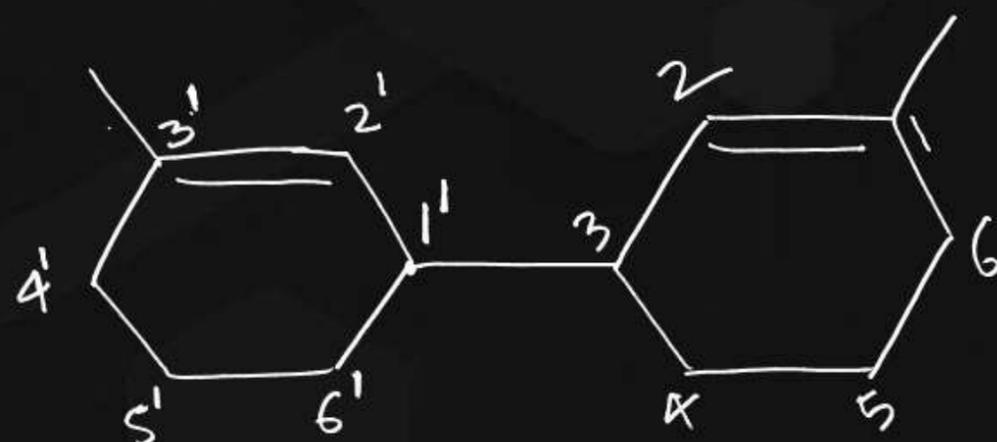


2-(1-methylethyl)but-1,3-diene

F.O.P.D.

- 1 ✓ Suffix-II
- 2 ✓ S-I - ene for Unsaturation, yne for Unsaturation

max. no. of unsaturation
 ⇒ F.P.D. common Preference given double



ene

enyl

3-(3-methylcyclohex-2-enyl)-1-methylcyclohex-1-ene.

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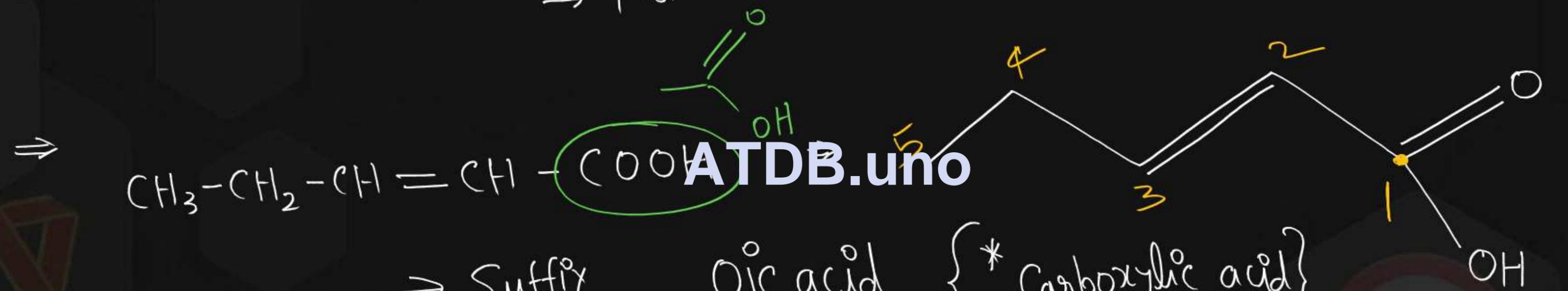


Functional Group =>

- monofunctional group
- polyfunctional group

monofunctional group =>

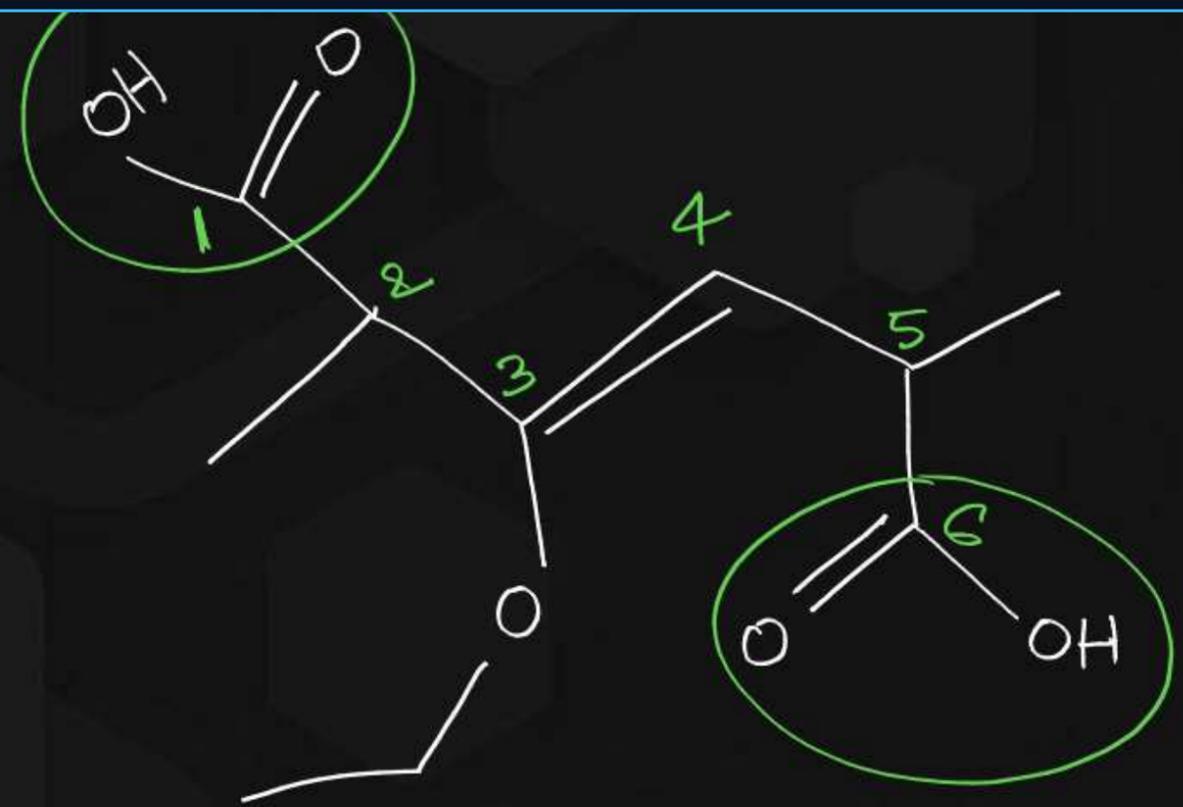
- F.G. Containing Carbon -> Included in main chain
- F.G. not Containing Carbon -> Assign position lowest.



-COOH

- Suffix: Oic acid { * Carboxylic acid }
- Prefix: Carboxy

Pent-2-ene-1-oic acid



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3-ethoxy-2,5-dimethylhex-3-ene-1,6-dioic acid

P

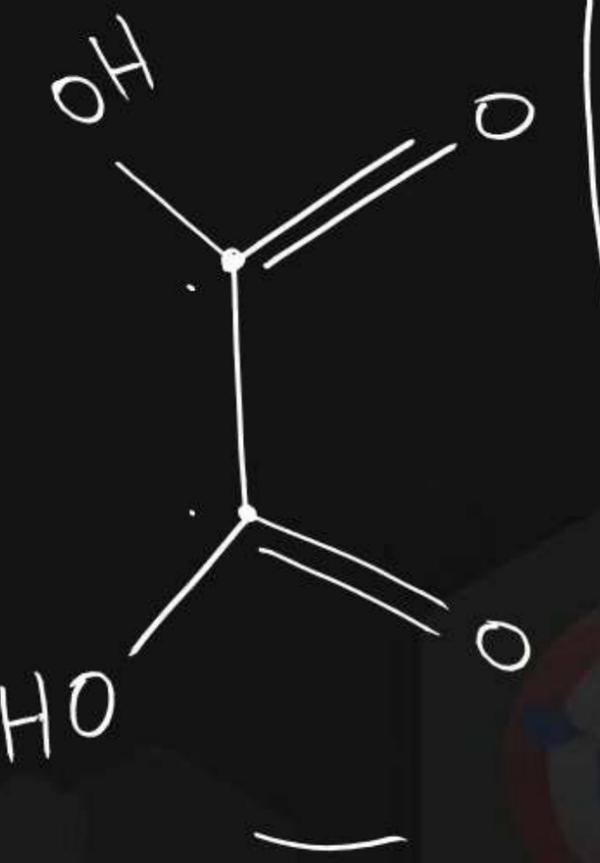
RW

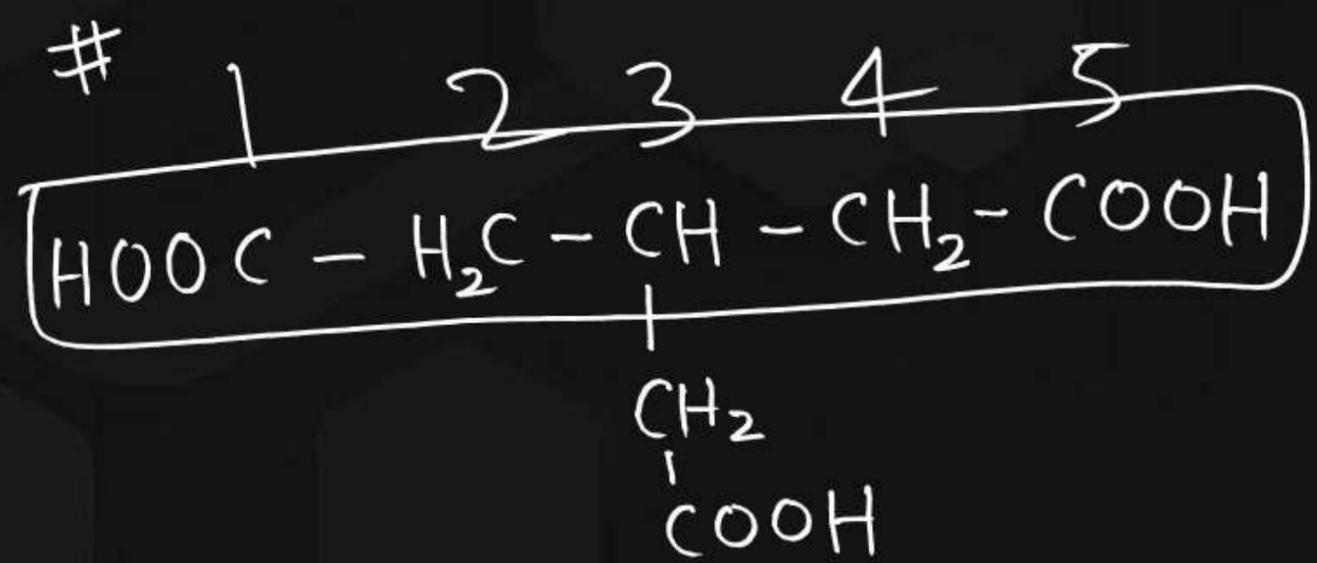
S-I

~~S-II~~

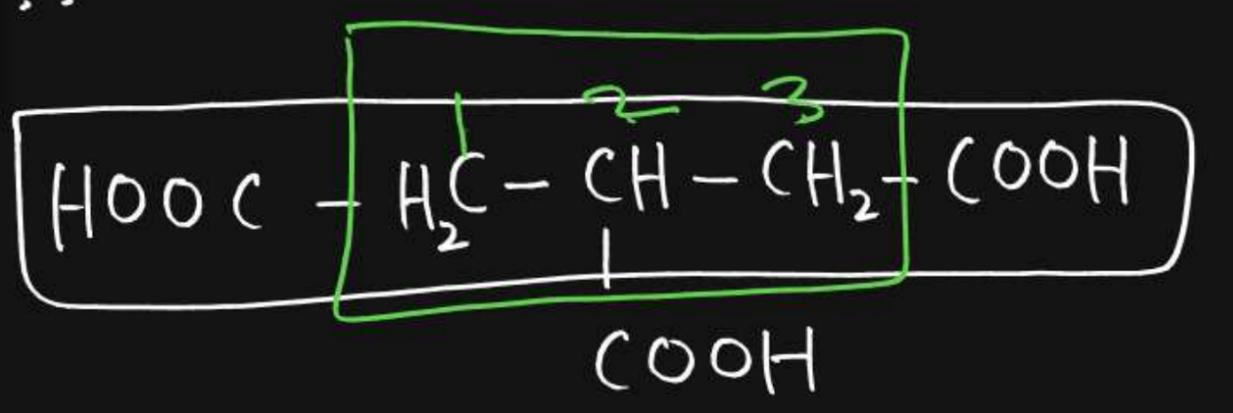
-OR

Alkoxy





3-Carboxymethyl Pentane-1,5-dioic acid

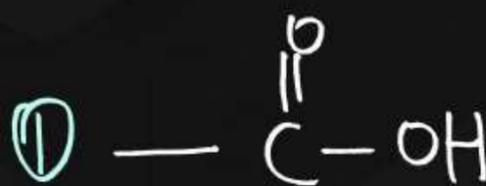


Propane-1,2,3-tricarboxylic acid

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\Rightarrow group.



Suffix-name

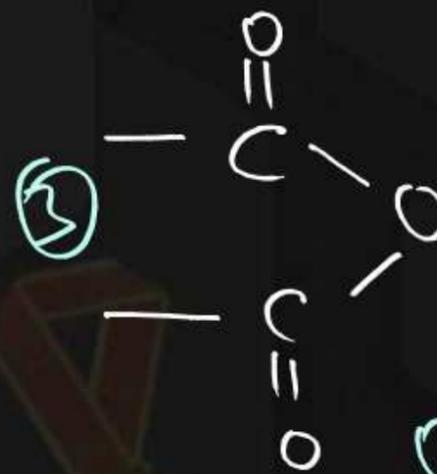
oic acid

Sulphonic acid

Prefix name

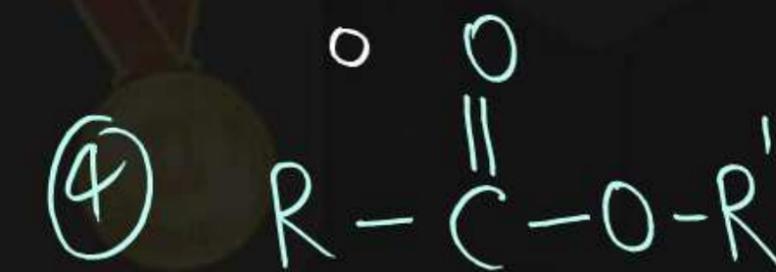
Carboxy

Sulpho



oic anhydride

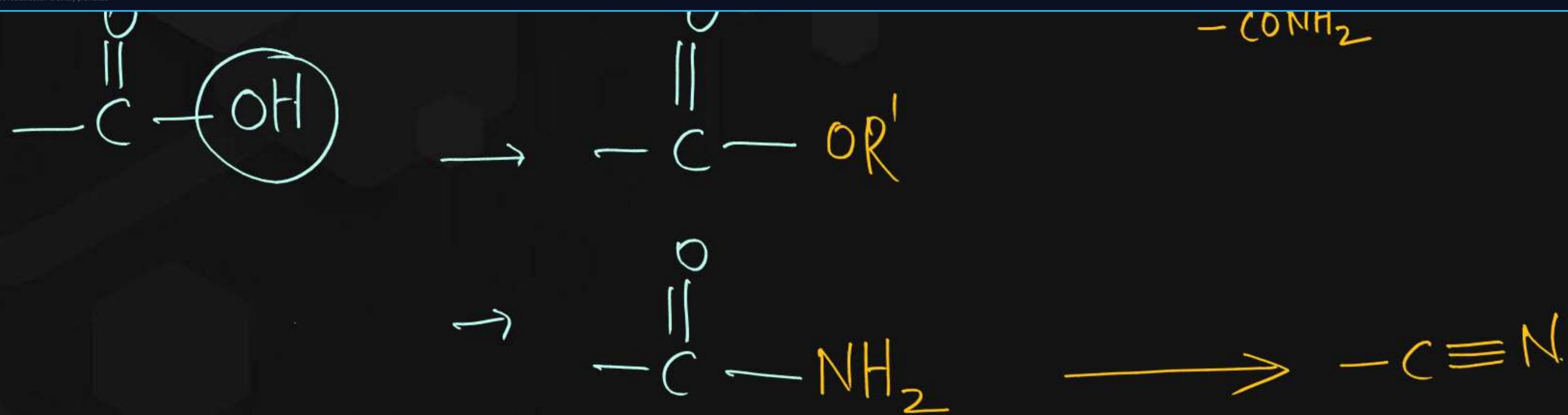
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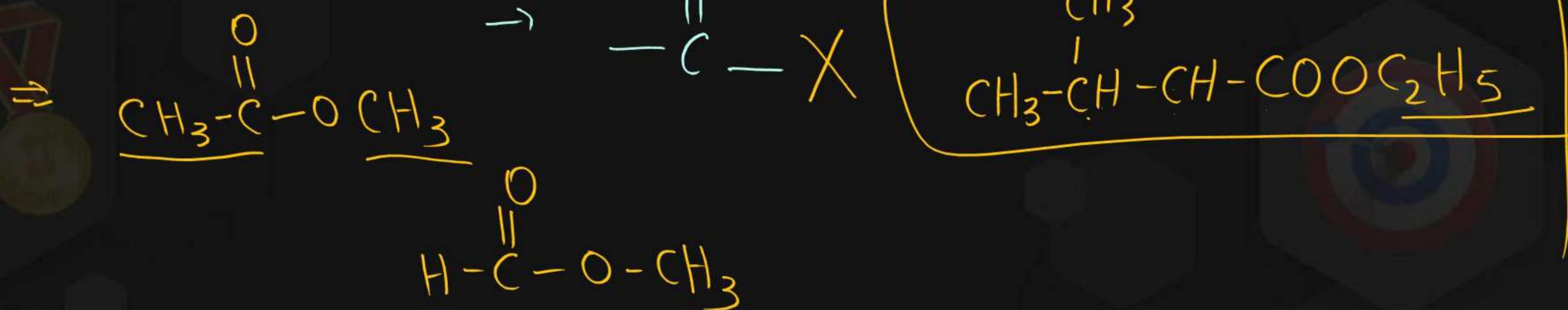
Alkyl alkanoate

oate

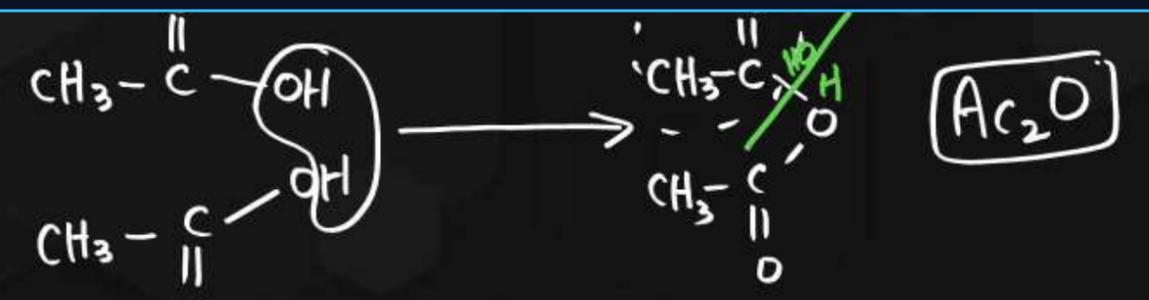
alkoxy carbonyl



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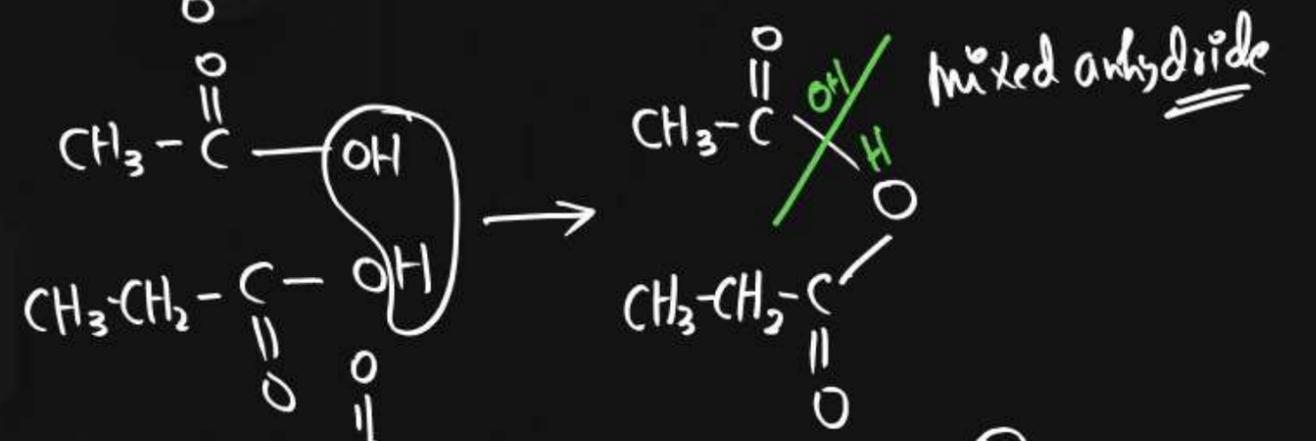


$\text{CH}_3\text{-COOH}$

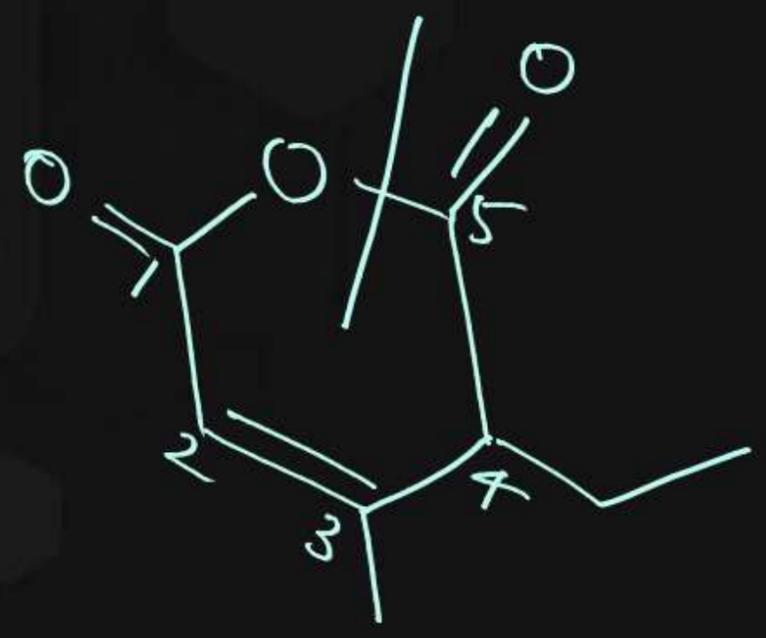
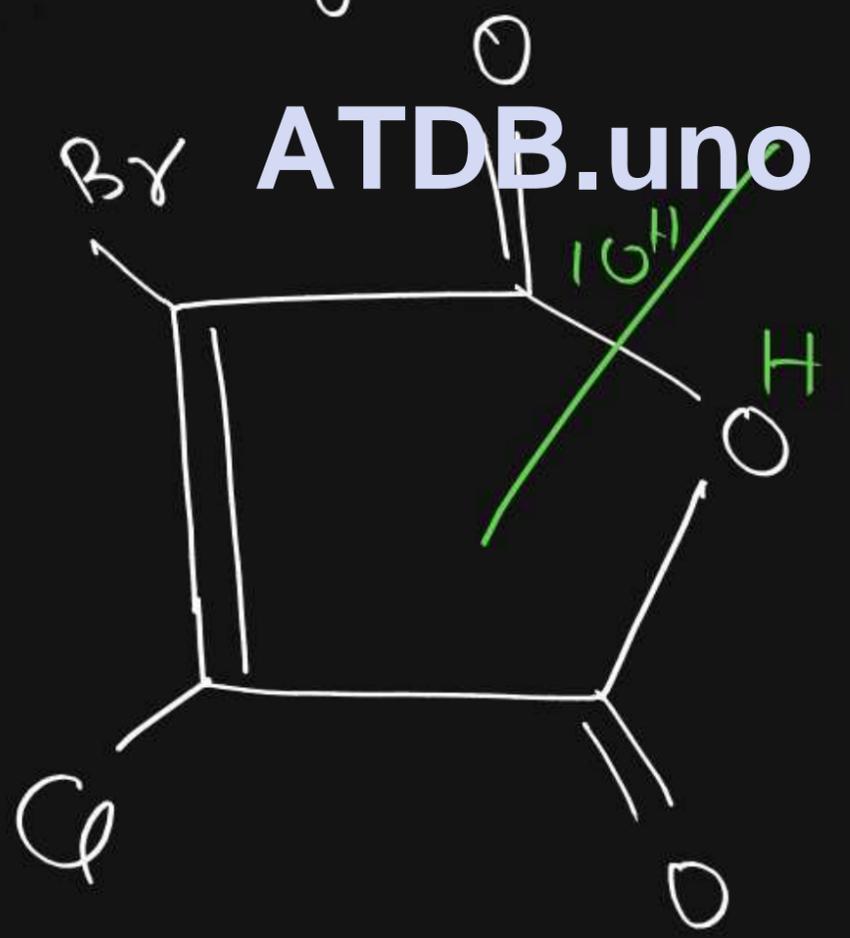


2-bromo-3-chlorobut-2-ene-1,4-dioic anhydride

$\text{CH}_3\text{-COOH} + \text{CH}_3\text{-CH}_2\text{-COOH}$



$\text{CH}_2\text{(COOH)-CH}_2\text{(COOH)}$

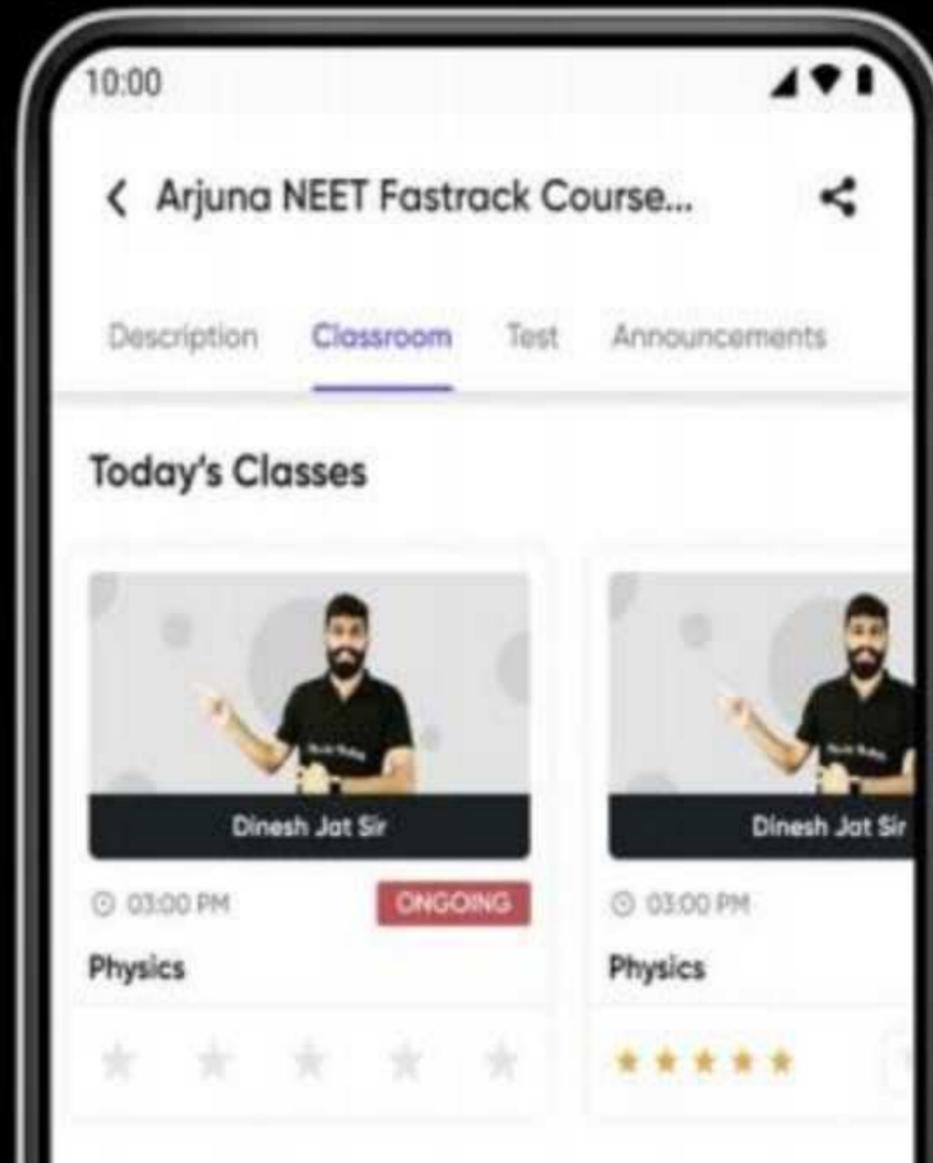




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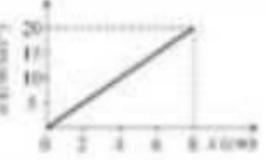
WORK, POWER AND ENERGY

DPP-1 (JAP/046)

[Introduction, Definition of work, work done by constant force, Area under force-displacement curve]

1. A particle moves from position $\vec{r}_1 = 3\hat{i} + 2\hat{j} - 6\hat{k}$ to position $\vec{r}_2 = 14\hat{i} + 13\hat{j} + 9\hat{k}$ under the action of force $-4\hat{i} + \hat{j} + 3\hat{k}$ N. The work done by this force will be

(A) 100 J
(B) 50 J



(A) 8×10^{-2} joules
(B) 16×10^{-2} joules
(C) 4×10^{-4} joules

Thank You!!!!

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