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BATCH CODE: 19-PJ301EA 2025

SUBJECT NAME: CHEMISTRY

CHAPTER NAME:

Organic chemistry IUPAC Nomenclature

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Lecture No. 03

By – Swapnil Sir

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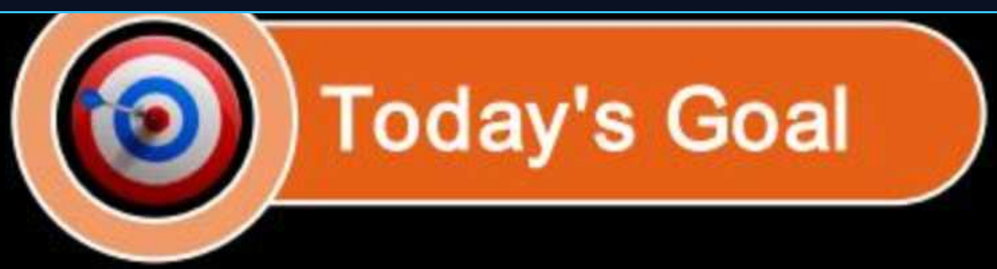

Subtopic

I.U.P.A.C. nomenclature

→ Unsaturated Hydrocarbons

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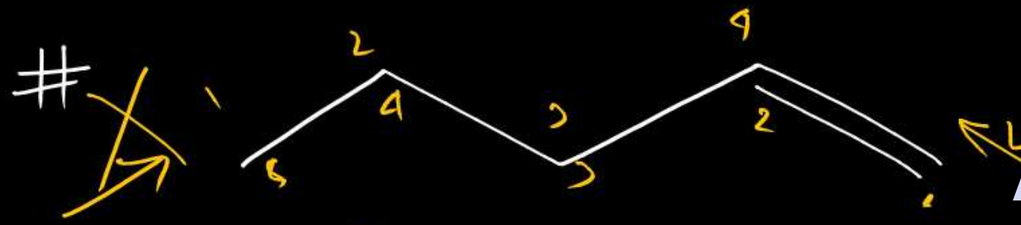
Saturated Hydrocarbons

Unsaturated Hydrocarbons ⇒ double bond (ene) or triple bond (yne) ∞ both present in molecule ∪



Pent-1-ene

Always mention Unsaturation position while writing S-I name

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follow F.P.D. { Assign lowest position } then follow lowest Sum of rule

Pent-2-ene

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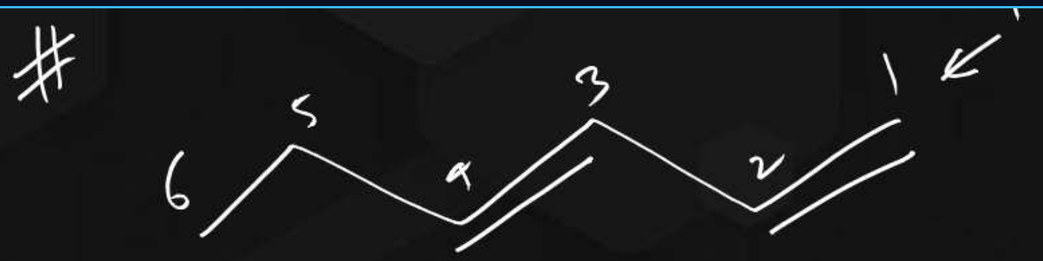
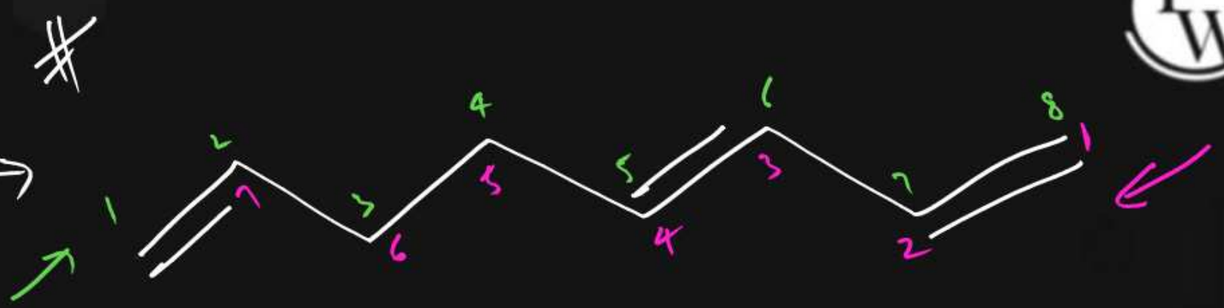


Hex-1,3-diene



FPD

Hex-1,4-diene

F.P.D. Same

lowest Sum

1+5+7

1+3+7

Oct-1,3,7-triene

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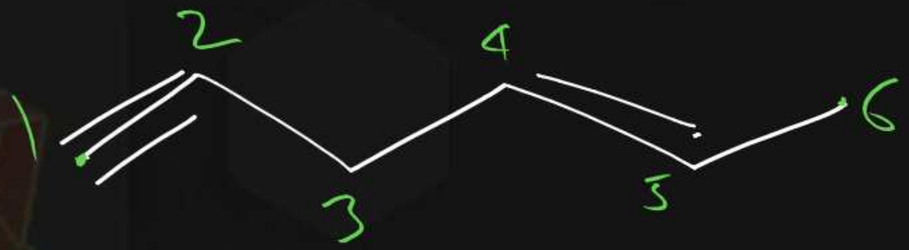
Combination

Hex-1-ene-5-yne

If = & ≡ present

F.P.D. same from either side

than preference given to = over ≡



Hex-4-ene-1-yne

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to find longest chain
Select the chain which contain maximum number of Unsaturation.

2-ethylPent-1-ene

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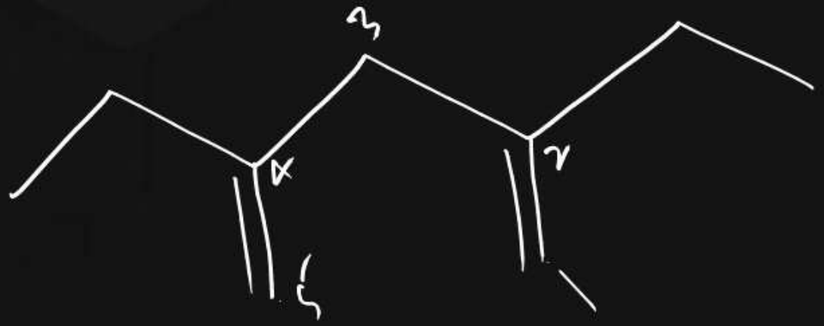

2,4-diethylPent-1,4-diene

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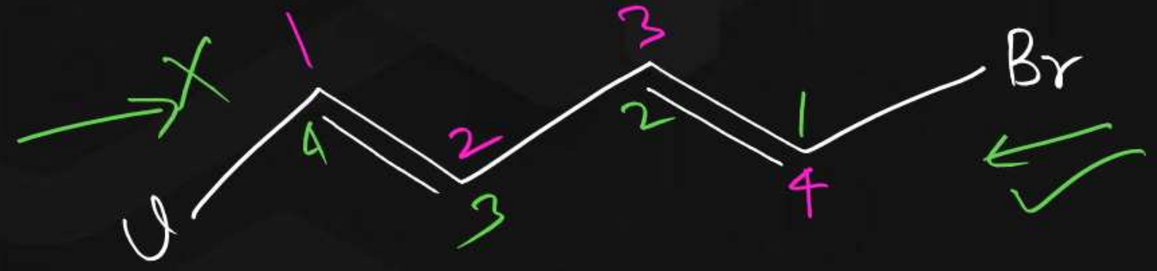

→ #1 F.P.D. (Same)

Start numbering from the side of substituent alphatical preference

1-bromo-4-chloroBut-1,3-diene

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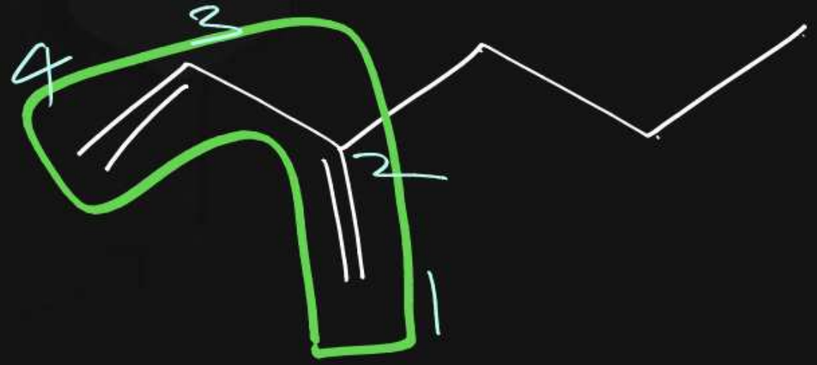

2-n-propylBut-1,3-diene

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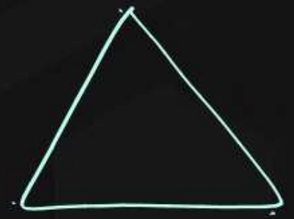
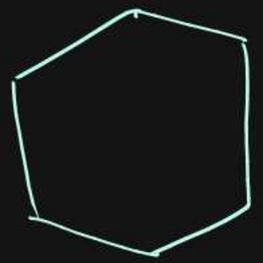
Cyclic Use prefix (cyclo



cycloPropane



cycloHexane

cycloButane

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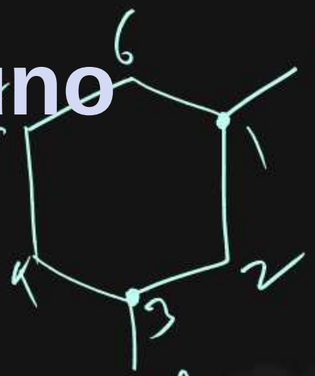

{Alphabatically}

1-bromo-3-chloro cycloHexane

cycloPentane

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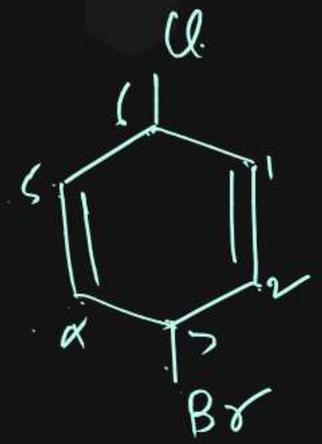
#

3-bromocyclohex-1-ene



3-bromo-6-chlorocyclohex-1,4-diene

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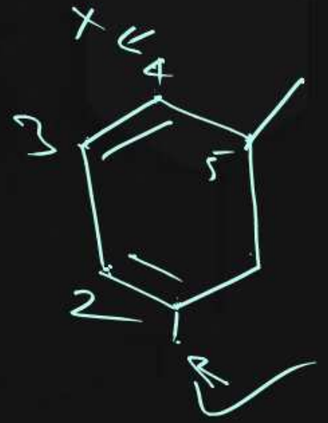

5-methylcyclohex-1,3-diene

3-ethyl-1-methylcyclopent-1-ene

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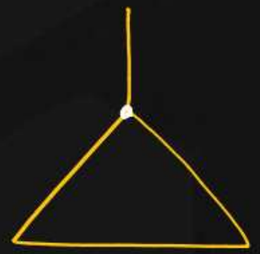
Case-I



C > O

main chain | side chain

methylcyclopropane

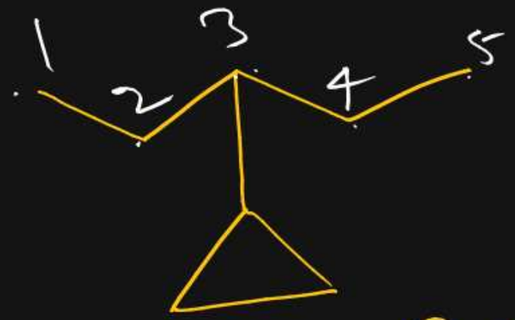
Case - II

C = O

main chain | Side chain

n-propylcyclopropane

Case - III



C < O

sidechain | main chain

3-cyclopropylpentane

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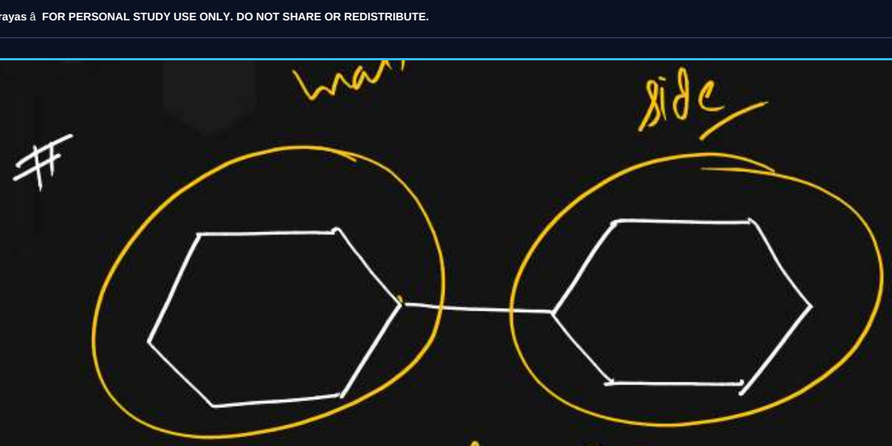
3-CyclobutylProp-1-ene



cyclohexylcyclohexane.

3-n-propylcyclopent-1-ene

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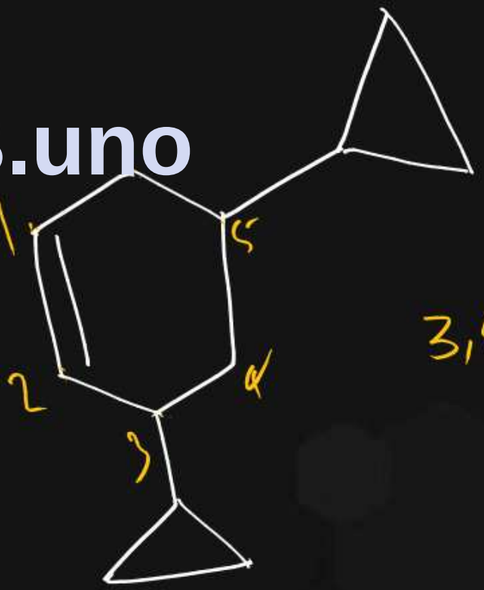

3,5-dicyclopropylcyclohex-1-ene

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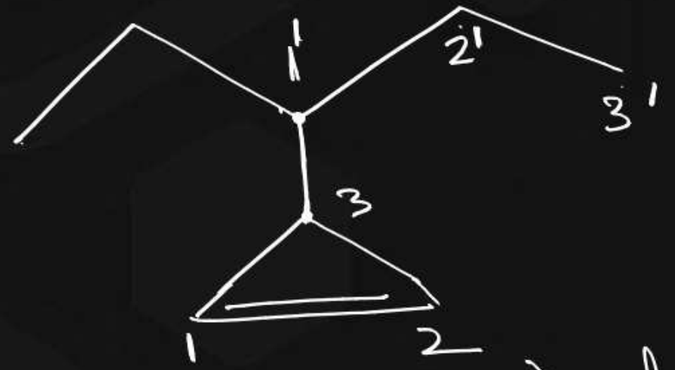

3-(1'-ethylpropyl)cycloProp-1-ene

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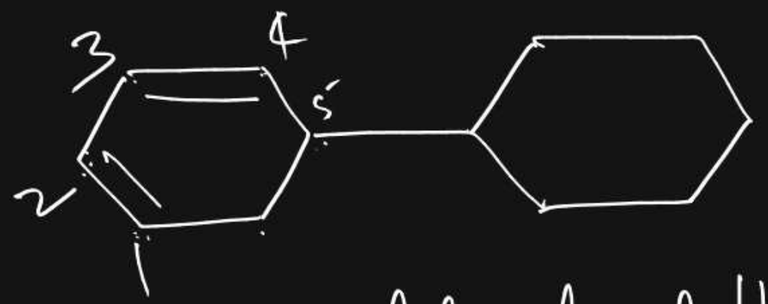

5-Cyclohexyl cycloHex-1,3-diene

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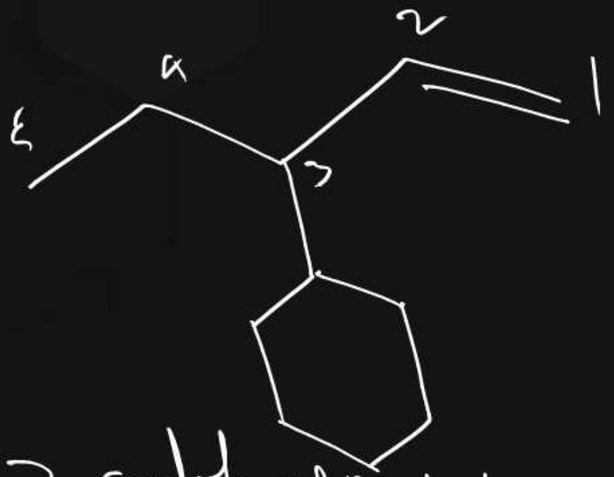

3-cyclohexylPent-1-ene

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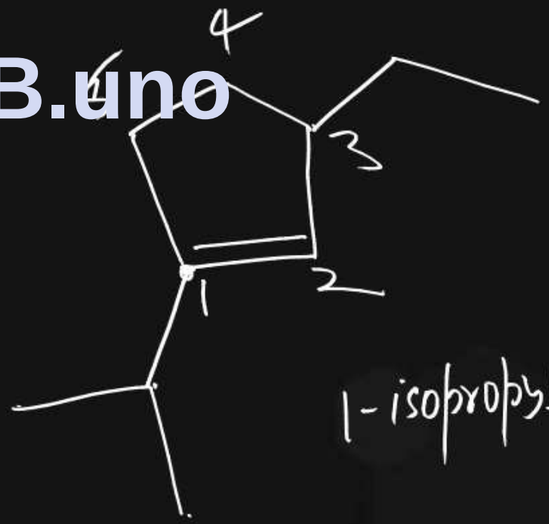

1-isopropyl-3-ethyl cycloPent-1-ene

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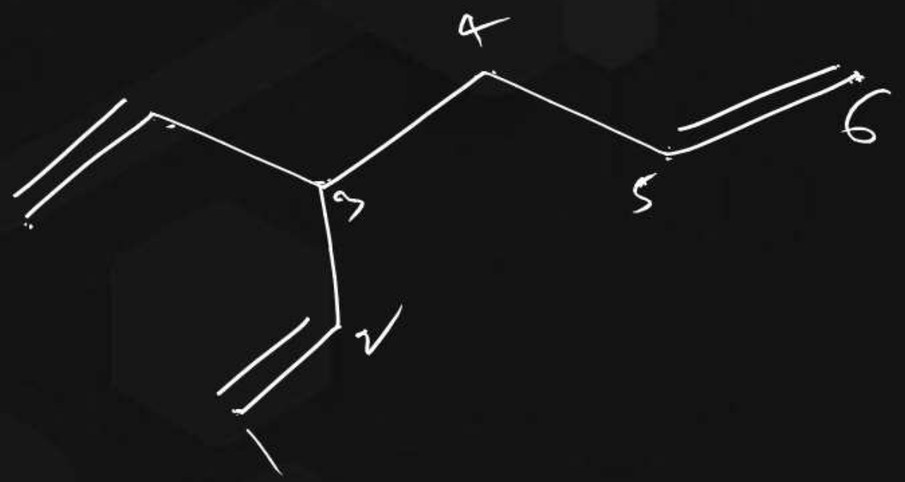
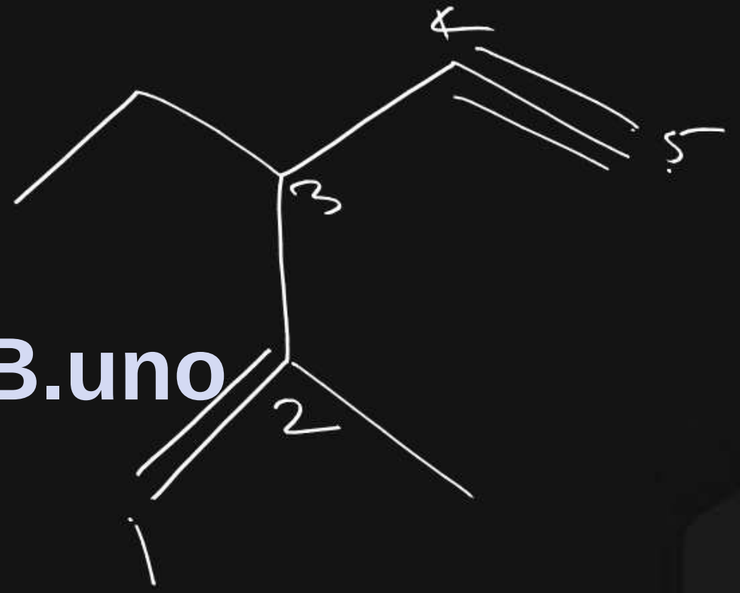


3-ethenylHex-1,5-diene



3-ethylPent-1-ene-4-yne

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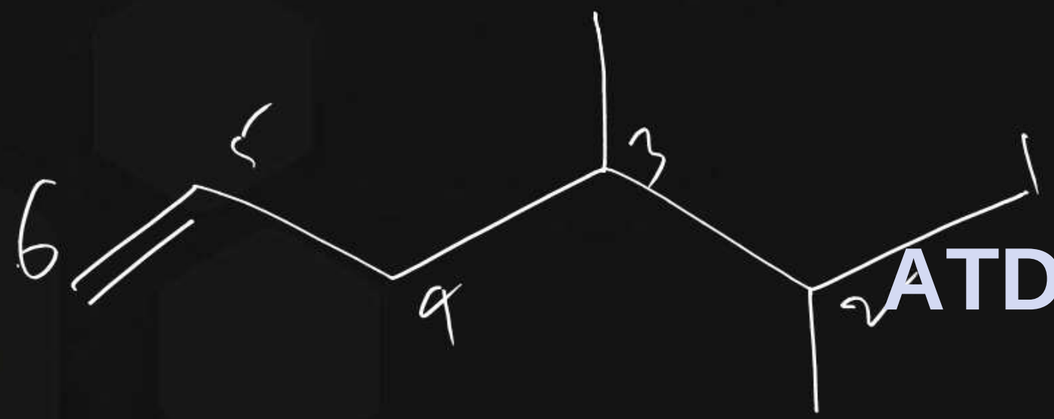
Functional group :⇒ (monofunctional) Suffix-II

F.P.D.

⇒ 1 Suffix-II



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For Polyfunctional → Refer to Seniority table → F.P.D.

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Carboxylic acid

Sulphonic acid

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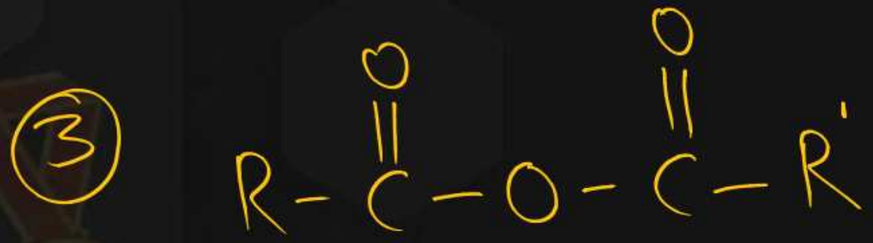
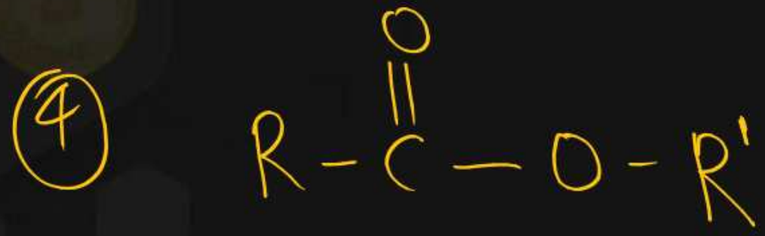
Acid anhydride



Ester



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(5) $R-\overset{\overset{O}{\|}}{C}-X$ acid halide { acid chloride, acid bromide }

(6) $R-\overset{\overset{O}{\|}}{C}-NH_2$ amide

(7) $R-C\equiv N$ cynide

(8) $R-N\equiv C$ Isocynide

(9) $R-\overset{\overset{O}{\|}}{C}-H$ aldehyde

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(10) $R-\overset{\overset{O}{\|}}{C}-R'$ Ketone.

(11) $R-OH$ alcohol

(12) $R-SH$ thioalcohol

(13) $R-\ddot{N}H_2$ amine

(14) $R-O-R'$ ether

(15) $R-NO_2$ nitro

(16) $R-X$ Alkyl halide (haloalkane)

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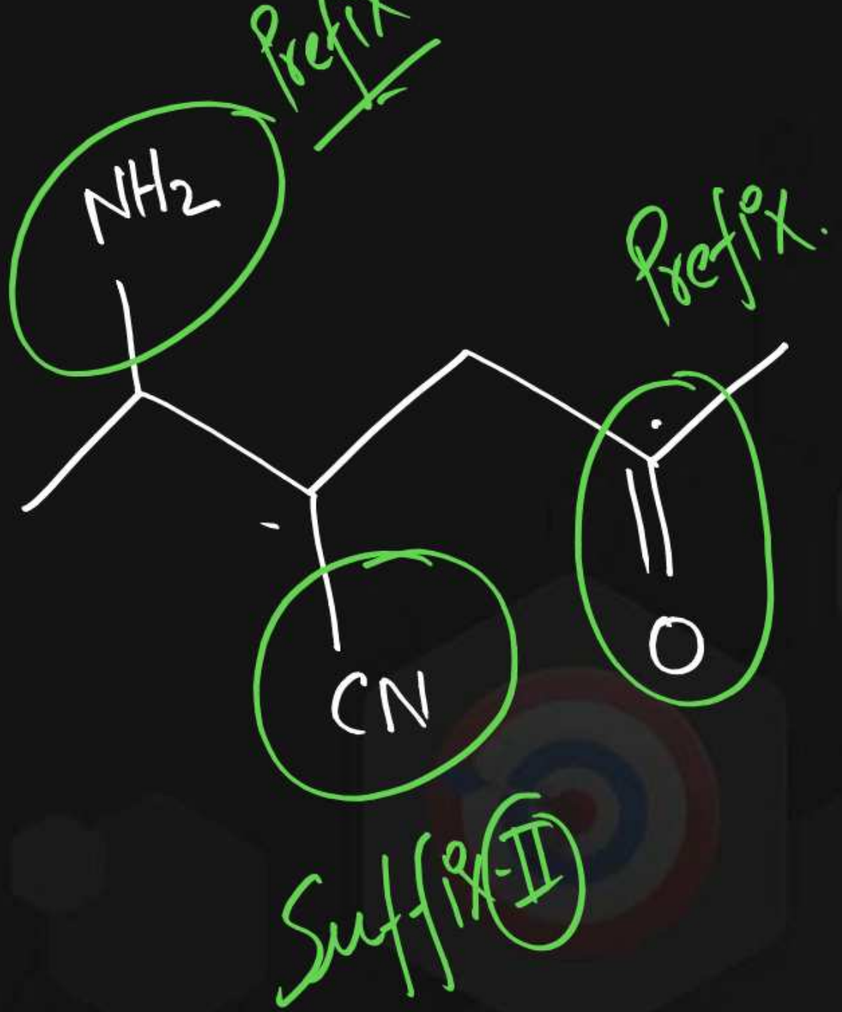
Seniority table



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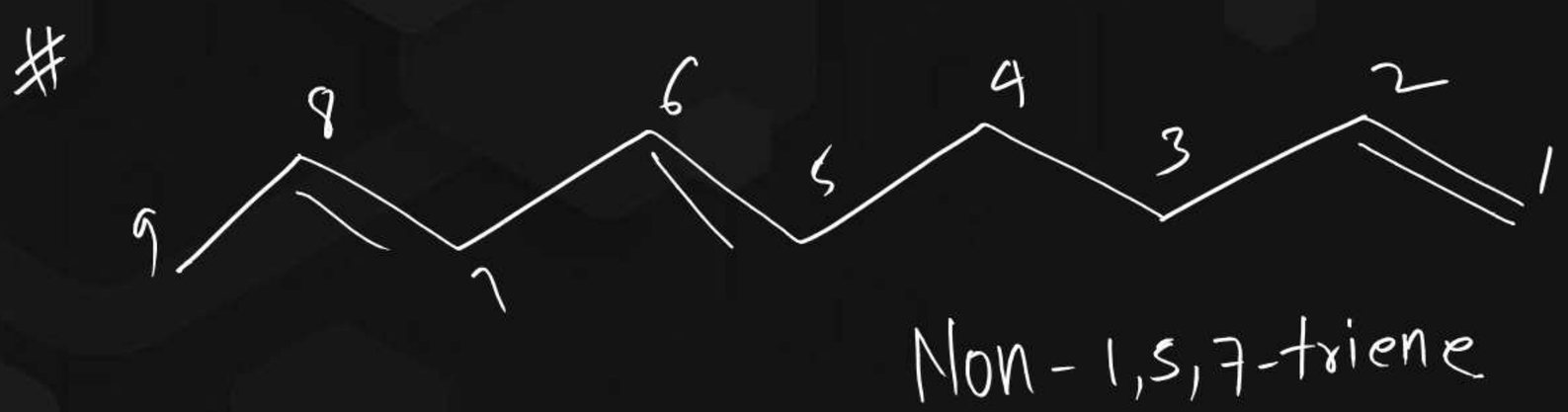

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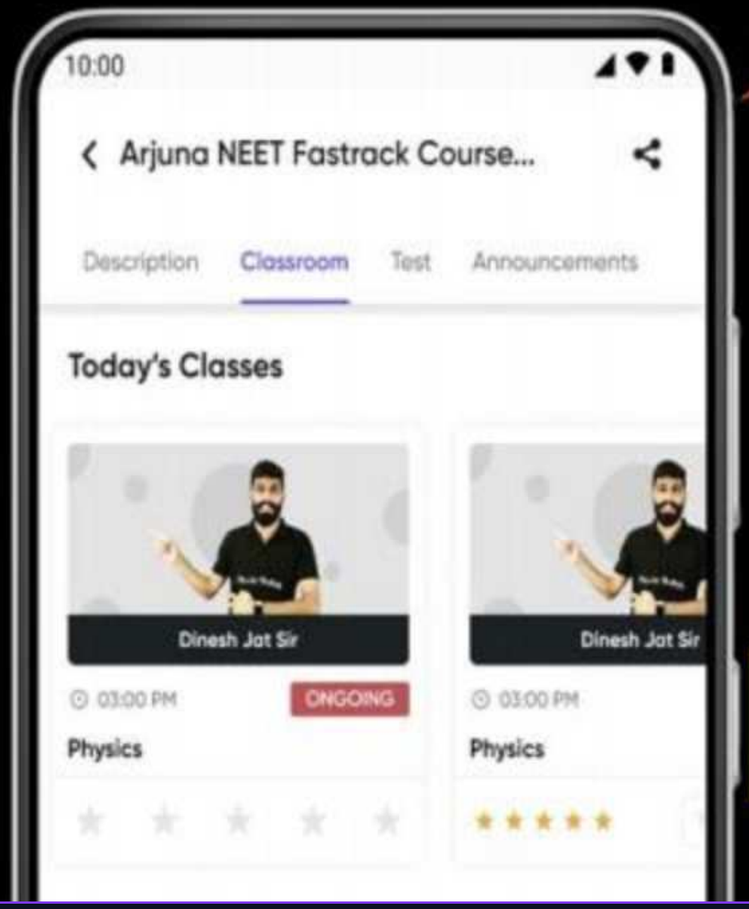
Rate your today's class in the Batch

Solve the DPP and check Solution



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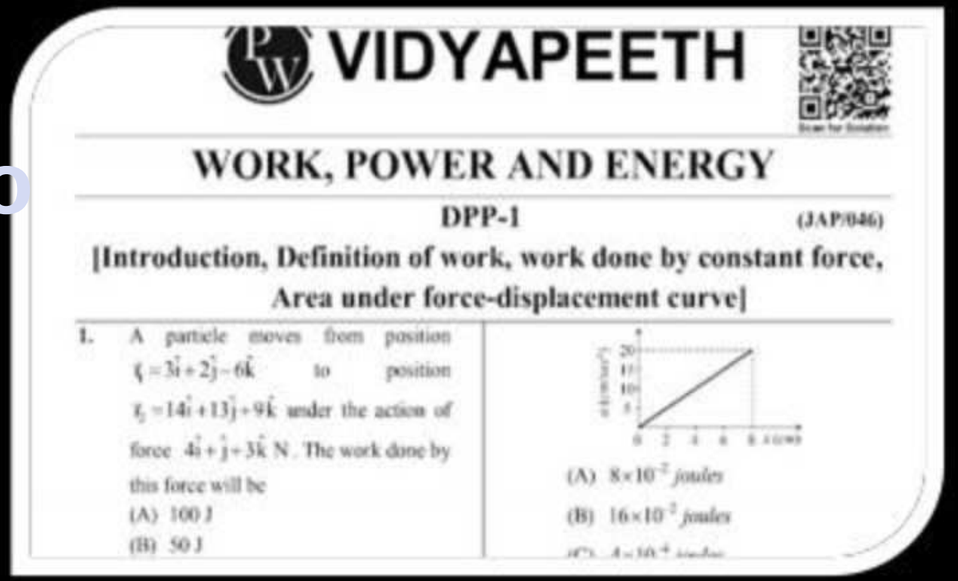

VIDYAPEETH

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

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Thank You!!!!

Check your performance through Student Dashboard

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