(C) 3

(D) 4

Correct Option : C

SOLUTION

Q-17 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY

Many aromatic compounds can be drawn with molecular formula $C_8H_8O_2$. Find out the no. of aromatic compounds which can be

drawn with this molecular formula and which also contains an $-O-$ (ether) linkage

(A) 7

(B) 5

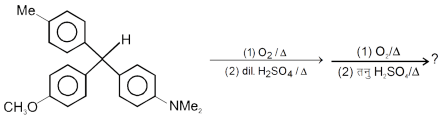
(C) 3

(D) 2

Correct Option : A

SOLUTION

NA



$$\xrightarrow[(2)\,.dil\,.H_2SO_4\,/\,\Delta]{(1)\,.O_2\,/\,\Delta} ?$$

Total number of organic products formed (major minor all).

(A) 6

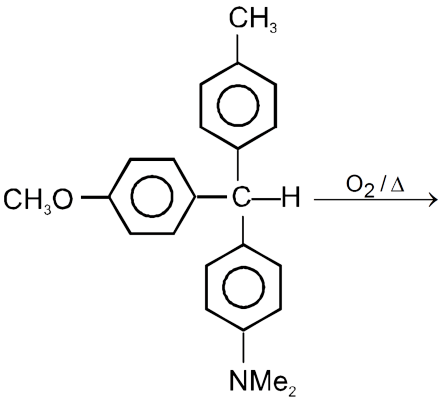
(B) 4

(C) 3

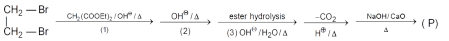
(D) 2

Correct Option : A

SOLUTION



Q-19 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY



$$\xrightarrow[(1)]{CH_2(COOet)_2 / OH^{?} / \Delta} \xrightarrow[(2)]{OH^{\ominus} / \Delta} \xrightarrow[H^{\oplus} / \Delta]{-CO_2} \xrightarrow[\Delta]{NaOH / CaO} (P)$$

Find out the molecular weight of end product (P).

(A) 54

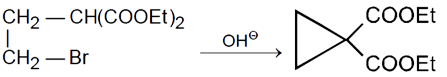
(B) 42

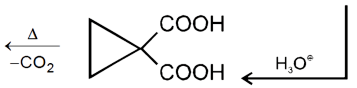
(C) 36

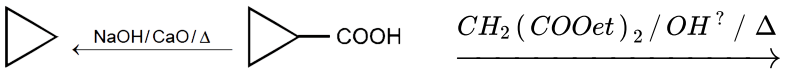
(D) 24

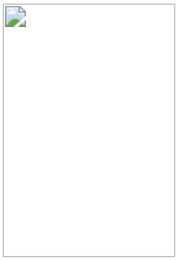
Correct Option : B

SOLUTION

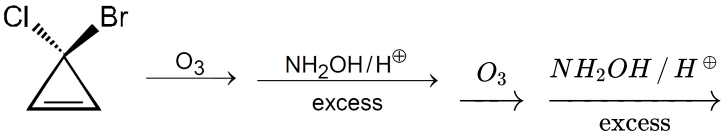








Q-20 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY



The total number isomeric products (including streomers) fomred at the end of the reaction is:

(A) 5

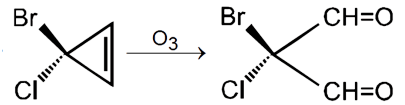
(B) 4

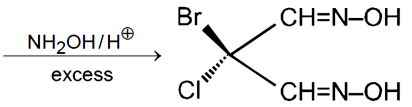
(C) 2

(D) 1

Correct Option : B

SOLUTION





cis - cis

trans - trans

cis R trans

trans S cis

Total isomeric product = 4

Q-21 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY

A aromatic tetracarboxylic acid $(C_{10}H_6O_8)$ can form two type of mooanhydrides on heating with P_2O_5 the sum of locants of all carboxylic groups in this compound will be:

(A) 14

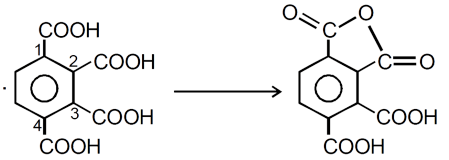
(B) 12

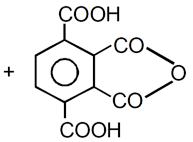
(C) 10

(D) 8

Correct Option : C

SOLUTION





Q-22 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY

In the following sequence of reaction all stereoisomers of (X) have been taken,

$$CH_3 - \underset{\underset{D}{|}}{CH} - CH = CH - \underset{\underset{D}{|}}{CH} - CH_3 \xrightarrow[(ii)\ .Zn/H_2O]{(i)\ .O_3} (Y) \xrightarrow{NH_2OH} (Z)$$

Here $P =$ Total number of stereoisomers of X

$Q =$ Total number of streoisomers of Y

$R =$ Total number of stereoisomers of Z.

What is sum of P, Q and R in the above reaction.

(A) 9

(B) 12

(C) 13

(D) 15

Correct Option : B

SOLUTION

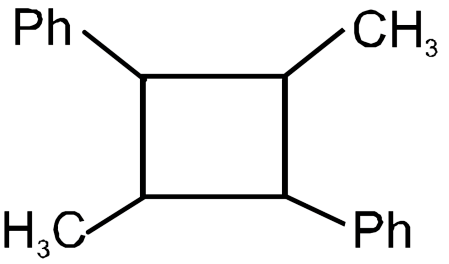
X has 3 stereocentres with similar ends, Hence 6 stereoisomers

$Y = CH_3 - \underset{|}{CH} - CHO$ has one sterteocentre,

Hence 2 stereoisomers $z = CH_3 - \underset{|}{\underset{D}{CH}} - CH = NOH$ has 2

stereocentres, hence 4 stereoisomers.

Q-23 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY



Sum of total number of optically active and optical inactive isomers of following compound.

(A) 2

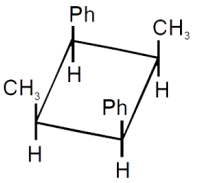
(B) 3

(C) 4

(D) 5

Correct Option : D

SOLUTION



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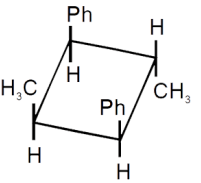

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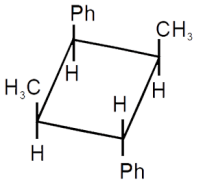

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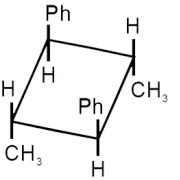

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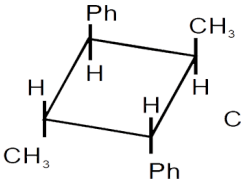


COS & POS

Q-24 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY

The total number of isomers for the alkyne with molecular formula $C_3HDClBr$ is:

(A) 4

(B) 6

(C) 8

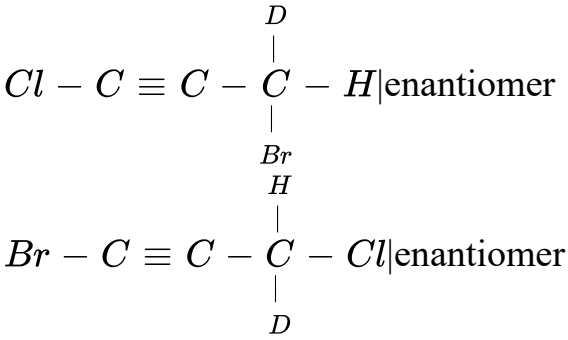
(D) 10

Correct Option : C

SOLUTION

$$D - C \equiv C - \overset{\overset{H}{|}}{\underset{\underset{Br}{|}}{C}} - Cl| \text{enantiomer}$$

$$H - C \equiv C - \overset{\overset{D}{|}}{\underset{\underset{|}{\underset{Br}{|}}}{C}} - Cl| \text{ enantiomer}$$



$Cl - C \equiv C - \overset{\overset{D}{|}}{\underset{\underset{Br}{|}}{C}} - H|$enantiomer

$Br - C \equiv C - \overset{\overset{H}{|}}{\underset{\underset{D}{|}}{C}} - Cl|$enantiomer

Q-25 - JEE ADVANCED-PART TEST-17 (CHEMISTRY)-CHEMISTRY

How many position isomers of dibromonaphthalene is possible if each ring of naphthalene has one halogen?

(A) 2

(B) 3

(C) 5

(D) 6

Correct Option : D

SOLUTION

189.