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EdLoop JEE

CHEMISTRY · JEE MAIN

General Organic Chemistry

Previous Year Questions with answers

289 questions · **162** papers · **2002–2026** · newest paper first

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What is in this PDF: every General Organic Chemistry question we hold from past JEE Main and AIEEE papers, with its options and answer. Where an answer comes from a source other than the official final key, it says so next to the answer.

Step-by-step solutions for every question are free in the EdLoop JEE app (Google Play) and on app.edloop.in. More chapters: pyq.edloop.in/free-pdfs/

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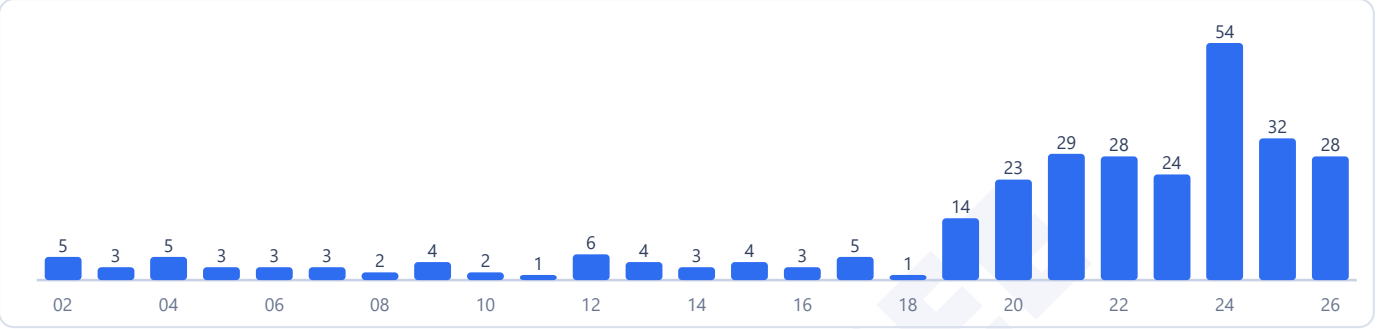
Chapter at a glance

5.1%	289	132 of 162	251 / 38
of Chemistry questions, 2019–2026	questions, 2002–2026	papers asked it, 2019–2026	MCQ / numerical, 2002–2026

Trend. Rising: 2 questions per paper in 2024–2026 against 1.1 in 2019–2023.

Questions per year



Counts are the questions we hold: 289 in 162 papers. No question in this chapter was found repeated across papers.

Most-asked topics in this chapter (2002–2026)

Isomerism	97
Electronic Effects	76
Nomenclature & Classification	58
Reaction Intermediates & Mechanism	58

How often it comes up

General organic chemistry establishes principles of structure, isomerism, and electronic effects under Unit 14: Some Basic Principles of Organic Chemistry in the Class 11 curriculum, securing rank 2 of 31 chapters with a 5.1% share of all chemistry questions. Across 2019 to 2026, General Organic Chemistry yielded 232 questions across 162 exam papers, delivering 5.1% of all chemistry questions and securing rank 2 of 31 chapters. In the earlier 2002 to 2018 period, it accounted for 57 questions across 38 papers with a 4.2% share. Between 2024 and 2026, its prominence grew massively to 114 questions across 58 papers, capturing a 7.4% share. The chapter's appearance weight has trended up strongly across recent exam sessions.

Questions have appeared every year from 2019 to 2026. Students faced an average of 1.4 questions per paper across 2019 to 2026, climbing to 2.0 questions per paper in the 2024 to 2026 cycle. It contributed 38 numerical answer questions between 2019 and 2026, typically involving chiral center counts, hyperconjugation alpha hydrogens, or total isomers.

Most-asked topics

The syllabus organizes into four fundamental topics:

- Isomerism: The leading topic with 97 total questions (69 in 2019 to 2026), examined extensively through 2026. Focuses on structural isomerism (chain, positional, functional, and metamerism), geometrical cis-trans relationships, conformational analysis (anti versus gauche and eclipsed butane), and optical isomerism (enantiomers, diastereomers, meso compounds, and chiral center counts).
- Electronic Effects: Generated 76 total questions (68 in 2019 to 2026), active through 2026. Core concepts evaluate resonance structures, hyperconjugation stability contributions, inductive effects, comparative acidities of substituted carboxylic acids and phenols, and base strengths of aliphatic versus aromatic amines.

- Reaction Intermediates & Mechanism: Contributed 58 total questions (51 in 2019 to 2026), evaluated through 2026. Focuses on relative stabilities of carbocations, carbanions, and carbon free radicals, nucleophile versus electrophile strengths, and aromaticity (aromatic, antiaromatic, and non-aromatic classifications).
- Nomenclature & Classification: Produced 58 total questions (44 in 2019 to 2026), active through 2026. Evaluates IUPAC rules for polyfunctional organic molecules, principal functional group priority orders, and carbon hybridization.

What the questions look like

Examiners test both theoretical principles and rapid structural analysis. Stereochemistry questions frequently provide molecular structures and ask students to find the total count of chiral centers or stereoisomers.

Electronic effect problems routinely ask candidates to rank substituted phenols or benzoic acids in order of increasing acidity, identifying the interplay between resonance electron-withdrawing nitro groups and inductive electron-donating alkyl groups. Intermediate stability problems test hyperconjugation alpha hydrogen counts across isomeric carbocations.

How to practise it

Because GOC is the second-ranked chapter across all chemistry, systematic mastery pays massive dividends:

1. Master priority rules for IUPAC: Memorize the official functional group seniority table from carboxylic acids and esters down to halides. 2. Calculate alpha hydrogens quickly: Practise determining hyperconjugation structures for alkenes, carbocations, and free radicals by counting hydrogens on adjacent sp3 carbons. 3. Understand resonance rules: Charges must align with electronegativities, complete octets take precedence, and greater numbers of covalent bonds confer higher stability. 4. Distinguish stereoisomers clearly: Be comfortable drawing Fischer projections, determining R/S configurations, and spotting planes or centers of symmetry in meso compounds. 5. Apply Hückel's rule: Ensure rings are planar, fully conjugated, and possess 4n+2 pi electrons for aromaticity, or 4n pi electrons for antiaromaticity.

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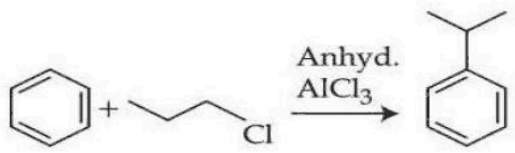
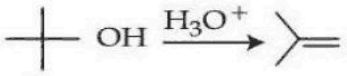
Q1 JEE Main 2026 · 8 Apr · Shift 2 MCQ

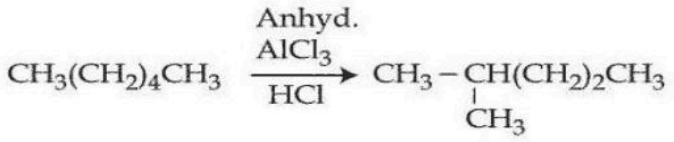
The major product of which of the following reaction is not obtained by rearrangement reaction ?

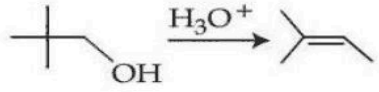
The major product of which of the following reaction is not obtained by rearrangement reaction ?

Options :

6911212004. 

6911212005. 

6911212006. 

6911212007. 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

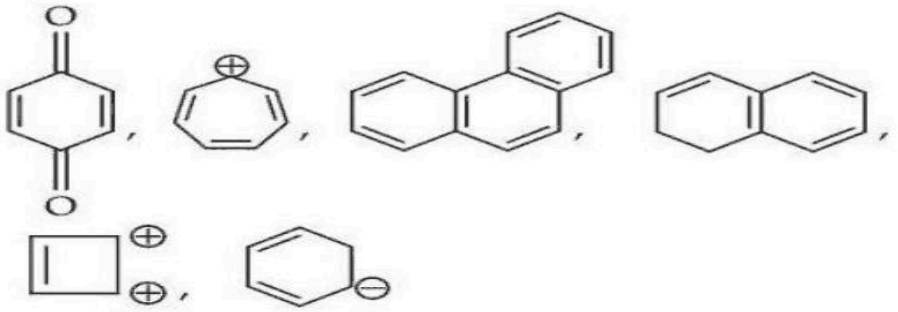
Answer: (B) · Official NTA final key

Q2 JEE Main 2026 · 8 Apr · Shift 2 MCQ

The total number of aromatic compounds/species from the following is

(see the figure above)

The total number of aromatic compounds/species from the following is



Options :

6911212008. 6

6911212009. 4

6911212010. 3

6911212011. 5

(A) 6
(B) 4
(C) 3
(D) 5

Answer: (C) 3 · Official NTA final key

Q3 JEE Main 2026 · 6 Apr · Shift 1 MCQ

Given below are two statements:

Statement I: 2,6-diethylcyclohexanone and 6-methyl-2-n-propylcyclohexanone are metamers.

Statement II: 2,2,6,6 - tetramethylcyclohexanone exhibits keto-enol tautomerism.

In the light of the above statements, choose the *__correct__* answer from the options given below

(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

Answer: (C) Statement I is true but Statement II is false · Official NTA final key

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Q4 JEE Main 2026 · 5 Apr · Shift 1 MCQ

Given below are two statements:

Statement I: On the basis of inductive effect, the order of stability of alkyl carbanions is $CH_3^- > CH_3-CH_2^- > (CH_3)_2CH^- > (CH_3)_3C^-$.

Statement II: Allyl and benzyl carbanions are more stabilised by inductive effect and not by resonance effect.

In the light of the above statements, choose the *correct* answer from the options given below

(A) Both Statement I and Statement II are correct
(B) Both Statement I and Statement II are incorrect
(C) Statement I is correct but Statement II is incorrect
(D) Statement I is incorrect but Statement II is correct

Answer: (C) Statement I is correct but Statement II is incorrect · Official NTA final key

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Q5 JEE Main 2026 · 5 Apr · Shift 2 MCQ

IUPAC name of the some alkenes are given below.

Find out the correct stability order.

A. 2-Methylbut-2-ene

B. *cis*-But-2-ene

C. 2, 3-Dimethylbut-2-ene

D. Prop-1-ene

Choose the **correct** answer from the options given below :

(A) C > A > B > D
(B) C > A > D > B
(C) B > D > A > C
(D) A > B > C > D

Answer: (A) C > A > B > D · Official NTA final key

Q6 JEE Main 2026 · 5 Apr · Shift 2 MCQ

Identify the **correct** IUPAC name of hydrocarbon (x) containing three primary carbon atoms and with molar mass 72 g mol^{-1}.

(A) 1, 1 - Dimethylcyclopropane
(B) 2, 2 - Dimethylpropane
(C) 2 - Methylbutane
(D) n-pentane

Answer: (C) 2 - Methylbutane · Official NTA final key

Q7 JEE Main 2026 · 4 Apr · Shift 1 MCQ

Increasing order of electron withdrawing power of following functional groups is:

a. $-CN$

b. $-COOH$

c. $-NO_2$

d. –I

(A) c < b < d < a

(B) c < a < b < d

(C) d < b < a < c

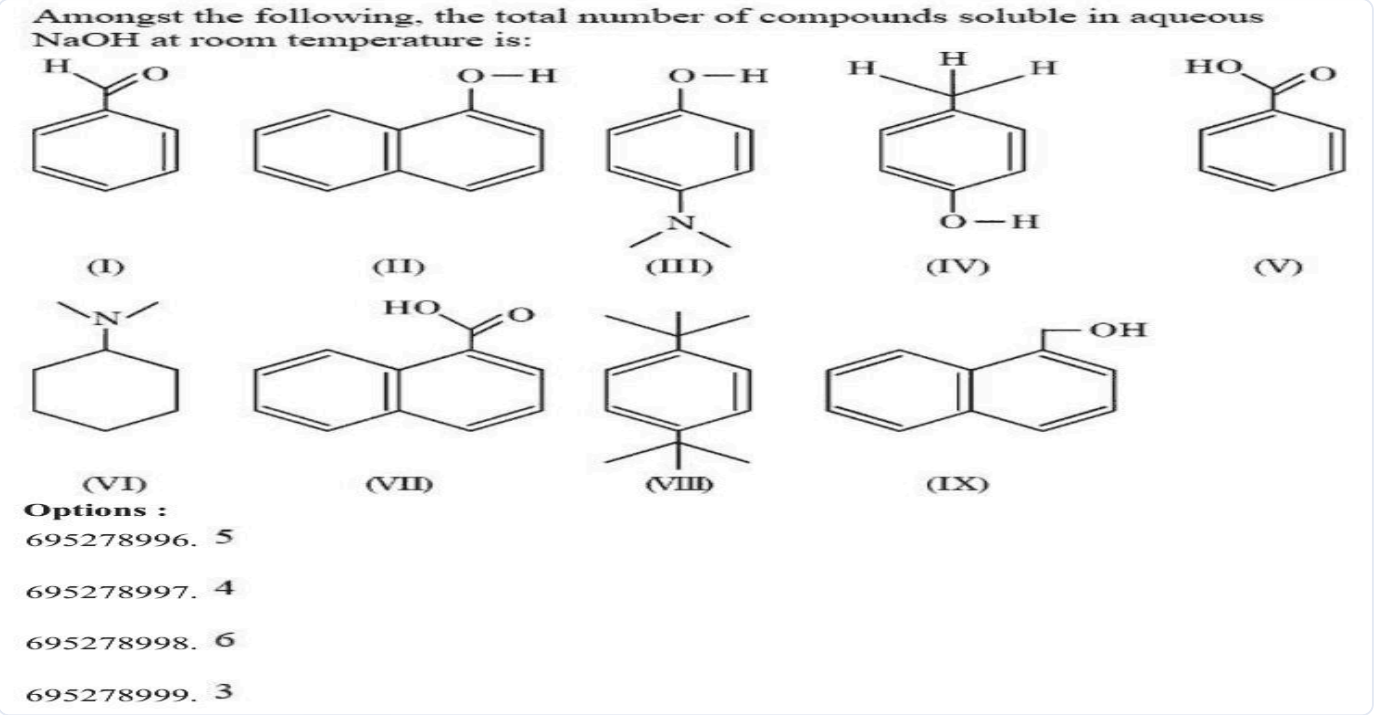
(D) a < b < c < d

Answer: (C) d < b < a < c · Official NTA final key

Q8 JEE Main 2026 · 4 Apr · Shift 1 MCQ

Amongst the following, the total number of compounds soluble in aqueous NaOH at room temperature is:

(see the figure above)



(A) 5

(B) 4

(C) 6

(D) 3

Answer: (A) 5 · Official NTA final key

Q9 JEE Main 2026 · 4 Apr · Shift 2 MCQ

Match the **LIST-I** with **LIST-II**

List-I Reaction	List-II Mechanism
A. Williamson Synthesis	I. Electrophilic addition
B. Friedel Craft Reaction	II. Free radical substitution

C. Bromination of vinyl benzene III. Nucleophilic substitution

D. Chlorination of toluene in light IV. Electrophilic substitution

Choose the *__correct__* answer from the options given below:

(A) A-III, B-I, C-II, D-IV

(B) A-III, B-IV, C-II, D-I

(C) A-III, B-IV, C-I, D-II

(D) A-I, B-III, C-IV, D-II

Answer: (C) A-III, B-IV, C-I, D-II · Official NTA final key

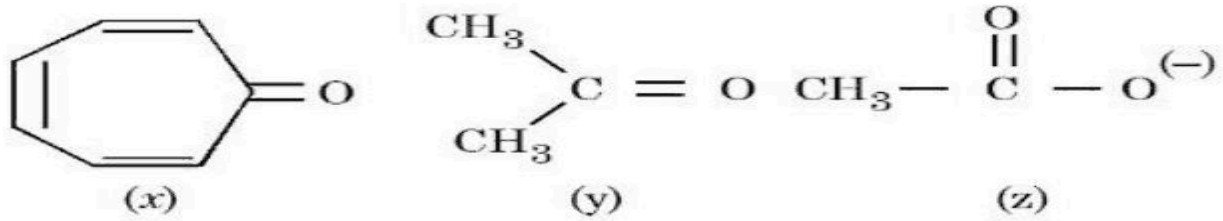
Q10 JEE Main 2026 · 4 Apr · Shift 2 MCQ

Consider the following molecules/species:

(see the figure above)

The correct order of carbon – oxygen double bond length is :

Consider the following molecules/species:



The correct order of carbon – oxygen double bond length is :

Options :

6952781486. $x > y > z$

6952781487. $y > z > x$

6952781488. $z > x > y$

6952781489. $x > z > y$

(A) $x > y > z$

(B) $y > z > x$

(C) $z > x > y$

(D) $x > z > y$

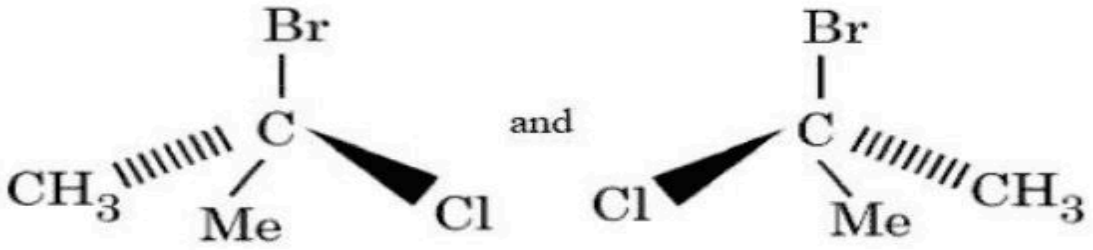
Answer: (D) $x > z > y$ · Official NTA final key

Q11 JEE Main 2026 · 4 Apr · Shift 2 MCQ

The following structures are

(see the figure above)

The following structures are



Options :

6952781502. enantiomers.

6952781503. identical molecules.

6952781504. diastereomers.

6952781505. meso compounds.

(A) enantiomers.
(B) identical molecules.
(C) diastereomers.
(D) meso compounds.

Answer: (B) identical molecules. · Official NTA final key

Q12 JEE Main 2026 · 4 Apr · Shift 2 MCQ

The descending order of acidity among the following compounds is:

A. *(see the figure above)*

B. *(see the figure above)*

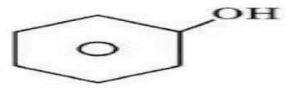
C. *(see the figure above)*

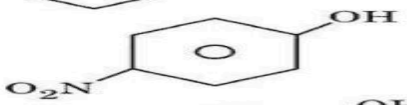
D. *(see the figure above)*

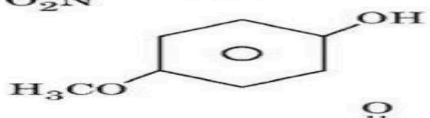
E. *(see the figure above)*

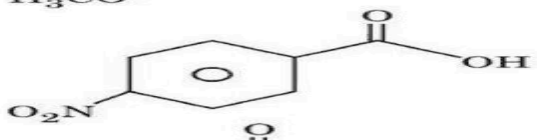
Choose the correct answer from the options given below:

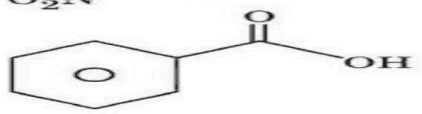
The descending order of acidity among the following compounds is:

A. 

B. 

C. 

D. 

E. 

Choose the correct answer from the options given below:

Options :

6952781506. $B > D > E > A > C$

6952781507. $D > B > E > A > C$

6952781508. $C > A > B > D > E$

6952781509. $D > E > B > A > C$

(A) B > D > E > A > C

(B) D > B > E > A > C

(C) C > A > B > D > E

(D) D > E > B > A > C

Answer: (D) D > E > B > A > C · Official NTA final key

Q13 JEE Main 2026 · 2 Apr · Shift 1 MCQ

In IUPAC nomenclature, the **correct** order of decreasing priority of functional group is :

(A) $-CONH_2, > C=O, -CHO, -NH_2, -C \equiv C-$

(B) $-CONH_2, -COOCH_3, -CHO, -NH_2, -OH$

(C) $-CONH_2, -CHO, > C=O, -NH_2, -C \equiv C-$

(D) $-CONH_2, -CHO, -CN, -NH_2, -C \equiv C-$

Answer: (C) $-CONH_2, -CHO, > C=O, -NH_2, -C \equiv C-$ · Official NTA final key

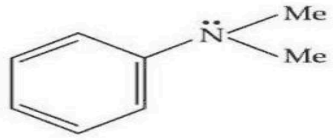
Q14 JEE Main 2026 · 2 Apr · Shift 1 MCQ

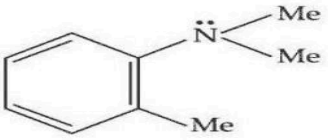
Consider the three aromatic molecules (P, Q and R) whose structures have been given below :

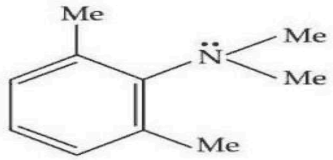
(see the figure above)

The **correct** order regarding the reactivity of these compounds with $Ph-\overset{(+)}{N} \equiv N\ Cl^{(-)}$ under optimum but slightly acidic medium is :

Consider the three aromatic molecules (P, Q and R) whose structures have been given below :

P. 

Q. 

R. 

The **correct** order regarding the reactivity of these compounds with $Ph-\underset{(+)}{N}\equiv N\,Cl^{(-)}$ under optimum but slightly acidic medium is :

Options :

691121239. P > Q > R

691121240. R > P > Q

691121241. R > Q > P

691121242. P > R > Q

(A) P > Q > R

(B) R > P > Q

(C) R > Q > P

(D) P > R > Q

Answer: (A) P > Q > R · Official NTA final key

Q15 JEE Main 2026 · 2 Apr · Shift 2 MCQ

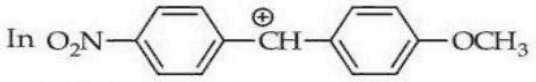
Given below are two statements :

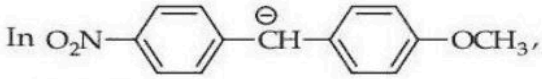
Statement I : In *(see the figure above)*, the carbocation is stabilised by +R effect of $-OCH_3$ group.

Statement II : In *(see the figure above)*, the carbanion is stabilised by $-$R effect of $-NO_2$ group.

In the light of the above statements, choose the **correct** answer from the options given below :

Given below are two statements :

Statement I : In  , the carbocation is stabilised by $+R$ effect of $-OCH_3$ group.

Statement II : In , the carbanion is stabilised by $-R$ effect of $-NO_2$ group.

In the light of the above statements, choose the **correct** answer from the options given below :

Options :

691121729. Both **Statement I** and **Statement II** are true

691121730. Both **Statement I** and **Statement II** are false

691121731. **Statement I** is true but **Statement II** is false

691121732. **Statement I** is false but **Statement II** is true

(A) Both **Statement I** and **Statement II** are true

(B) Both **Statement I** and **Statement II** are false

(C) **Statement I** is true but **Statement II** is false

(D) **Statement I** is false but **Statement II** is true

Answer: (A) Both **Statement I** and **Statement II** are true · Official NTA final key

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Q16 JEE Main 2026 · 28 Jan · Shift 1 MCQ

CORRECT order of stability for the following is

$CH_2 = CH^-, CH_3 - CH_2^-, CH{\equiv}C^-$

(A) $CH{\equiv}C^- > CH_2 = CH^- > CH_3 - CH_2^-$

(B) $CH_3 - CH_2^- > CH_2 = CH^- > CH{\equiv}C^-$

(C) $CH_2 = CH^- > CH{\equiv}C^- > CH_3 - CH_2^-$

(D) $CH{\equiv}C^- > CH_3 - CH_2^- > CH_2 = CH^-$

Answer: (A) $CH{\equiv}C^- > CH_2 = CH^- > CH_3 - CH_2^-$ · Official NTA final key

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Q17 JEE Main 2026 · 28 Jan · Shift 2 MCQ

The cyclic cations having the same number of hyperconjugation are :

A. *(see the figure above)*

B. *(see the figure above)*

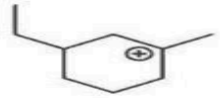
C. *(see the figure above)*

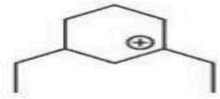
D. *(see the figure above)*

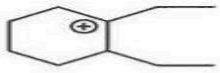
Choose the **correct** answer from the options given below :

Q.55 The cyclic cations having the same number of hyperconjugation are :

A. 

B. 

C. 

D. 

Choose the **correct** answer from the options given below :

Options

1. A, C and D only
2. A and B Only
3. A and C Only
4. B and C Only

(A) A, C and D only
(B) A and B Only
(C) A and C Only
(D) B and C Only

Answer: (C) A and C Only · Official NTA final key

Q18 JEE Main 2026 · 24 Jan · Shift 1 MCQ

Arrange the following carbanions in the decreasing order of stability.

I. $p-\mathrm{Br}-\mathrm{C_6H_4}-\ddot{\mathrm{C}}\mathrm{H_2}^{\ominus}$

II. $\mathrm{C_6H_5}-\ddot{\mathrm{C}}\mathrm{H_2}^{\ominus}$

III. $p-\mathrm{CH_3O}-\mathrm{C_6H_4}-\ddot{\mathrm{C}}\mathrm{H_2}^{\ominus}$

IV. $p-\mathrm{CHO}-\mathrm{C_6H_4}-\ddot{\mathrm{C}}\mathrm{H_2}^{\ominus}$

V. $p-\mathrm{CH_3}-\mathrm{C_6H_4}-\ddot{\mathrm{C}}\mathrm{H_2}^{\ominus}$

Choose the **correct** answer from the options given below:

(A) IV $>$ I $>$ II $>$ V $>$ III
(B) I $>$ IV $>$ II $>$ V $>$ III
(C) I $>$ II $>$ IV $>$ V $>$ III
(D) IV $>$ II $>$ I $>$ III $>$ V

Answer: (A) IV $>$ I $>$ II $>$ V $>$ III · Official NTA final key

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Q19 JEE Main 2026 · 24 Jan · Shift 2 MCQ

Given below are two statements:

Statement I: There are several conformers for n−butane. Out of those conformers,

(see the figure above)

is the least stable and most stable conformer is

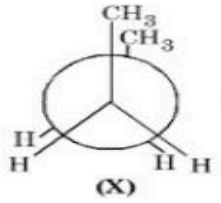
(see the figure above)

Statement II: As the dihedral angle increases, torsional strain decreases from (X) to (Y).

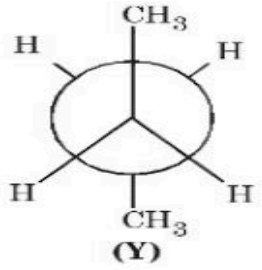
In the light of the above statements, choose the ***correct*** answer from the options given below

Q.58 Given below are two statements:

Statement I: There are several conformers for n−butane. Out of those conformers,



is the least stable and most stable conformer is



Statement II: As the dihedral angle increases, torsional strain decreases from (X) to (Y).

In the light of the above statements, choose the ***correct*** answer from the options given below

Options
1. Both Statement I and Statement II are false
2. Statement I is false but Statement II is true
3. Statement I is true but Statement II is false
4. Both Statement I and Statement II are true

(A) Both Statement I and Statement II are false

(B) Statement I is false but Statement II is true

(C) Statement I is true but Statement II is false

(D) Both Statement I and Statement II are true

Answer: (D) Both Statement I and Statement II are true · Official NTA final key

Q20 JEE Main 2026 · 24 Jan · Shift 2 MCQ

Find out the statements which are **not** true.

A. Resonating structures with more number of covalent bonds and lesser charge separation are more stable.

B. In electromeric effect, an unsaturated system shows $+E$ effect with nucleophile and $-E$ effect with electrophile.

C. Inductive effect is responsible for high melting point, boiling point and dipole moment of polar compounds.

D. The greater the number of alkyl groups attached to the doubly bonded carbon atoms, higher is the heat of hydrogenation.

E. Stability of carbanion increases with the increase in s − character of the carbon carrying the negative charge.

Choose the ***correct*** answer from the options given below:

(A) B, D & E only
(B) A, D & E only
(C) B & D only
(D) A, C & D only

Answer: (C) B & D only · Official NTA final key

Q21 JEE Main 2026 · 23 Jan · Shift 1 Numerical

Consider all the structural isomers with molecular formula $C_5H_{11}Br$ are separately treated with KOH(aq) to give respective substitution products, without any rearrangement. The number of products which can exhibit optical isomerism from these is _____.

Numerical value type: the answer is a number.

Accepted answers: 3 or 6. · Official NTA final key

Q22 JEE Main 2026 · 23 Jan · Shift 2 MCQ

Given below are two statements:

Statement I: $(CH_3)_3\overset{\oplus}{C}$ is more stable than $\overset{\oplus}{C}H_3$ as nine hyperconjugation interactions are possible in $(CH_3)_3\overset{\oplus}{C}$.

Statement II: $\overset{\oplus}{C}H_3$ is less stable than $(CH_3)_3\overset{\oplus}{C}$ as only three hyperconjugation interactions are possible in $\overset{\oplus}{C}H_3$.

In the light of the above statements, choose the **correct** answer from the options given below

(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is false but Statement II is true
(D) Statement I is true but Statement II is false

Answer: (D) Statement I is true but Statement II is false · Official NTA final key

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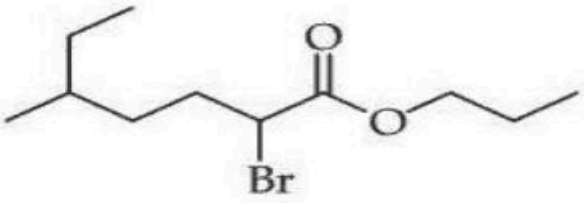
Q23 JEE Main 2026 · 22 Jan · Shift 2 MCQ

The IUPAC name of the following compound is :

(see the figure above)

Q.53

The IUPAC name of the following compound is :



Options

1. n-propyl-2-bromo-5-methylheptanoate
2. 2-bromo-5-methylhexylpropanoate
3. 2-bromo-5-methylpropanoate
4. n-propyl-1-bromo-4-methylhexanoate

(A) n-propyl-2-bromo-5-methylheptanoate
(B) 2-bromo-5-methylhexylpropanoate
(C) 2-bromo-5-methylpropanoate
(D) n-propyl-1-bromo-4-methylhexanoate

Answer: (A) n-propyl-2-bromo-5-methylheptanoate · Official NTA final key

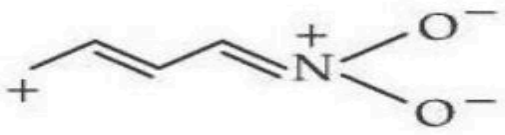
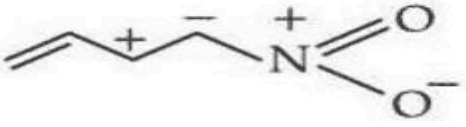
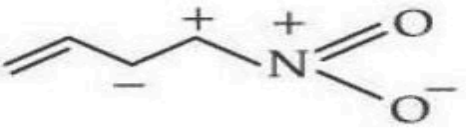
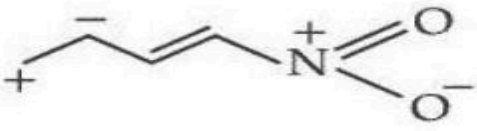
Q24 JEE Main 2026 · 21 Jan · Shift 1 MCQ

From the following, the least stable structure is :

Q.52

From the following, the least stable structure is :

Options

1. 
2. 
3. 
4. 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Official NTA final key

Q25 JEE Main 2026 · 21 Jan · Shift 1 MCQ

Identify **correct** statements from the following :

A. Propanal and propanone are functional isomers.

B. Ethoxyethane and methoxypropane are metamers.

C. But-2-ene shows optical isomerism.

D. But-1-ene and but-2-ene are functional isomers.

E. Pentane and 2, 2-dimethyl propane are chain isomers.

Choose the **correct** answer from the options given below :

(A) A, B and C only
(B) B, C and D only
(C) A, B and E only
(D) C, D and E only

Answer: (C) A, B and E only · Official NTA final key

Q26 JEE Main 2026 · 21 Jan · Shift 2 MCQ

Given below are four compounds :

(a) n-propyl choride

(b) iso-propyl chloride

(c) sec-butyl chloride

(d) neo-pentyl chloride

Percentage of carbon in the one which exhibits optical isomerism is :

(A) 56
(B) 40
(C) 46
(D) 52

Answer: (D) 52 · Official NTA final key

Q27 JEE Main 2026 · 21 Jan · Shift 2 MCQ

Given below are two statements :

Statement I : Compound (X), shown below, dissolves in $NaHCO_3$ solution and has two chiral carbon atoms

(see the figure above)

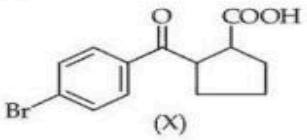
Statement II : Compound (Y), shown below, has two carbons with sp^3 hybridization, one carbon with sp^2 and one carbon with sp hybridization

(see the figure above)

In the light of the above statements, choose the **correct** answer from the options given below :

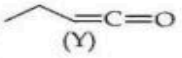
Q.63 Given below are two statements :

Statement I : Compound (X), shown below, dissolves in $NaHCO_3$ solution and has two chiral carbon atoms



(X)

Statement II : Compound (Y), shown below, has two carbons with sp^3 hybridization, one carbon with sp^2 and one carbon with sp hybridization



(Y)

In the light of the above statements, choose the **correct** answer from the options given below :

Options

1. **Statement I is false but Statement II is true**
2. **Both Statement I and Statement II are false**
3. **Both Statement I and Statement II are true**
4. **Statement I is true but Statement II is false**

(A) **Statement I** is false but **Statement II** is true

(B) Both **Statement I** and **Statement II** are false

(C) Both **Statement I** and **Statement II** are true

(D) **Statement I** is true but **Statement II** is false

Answer: (C) Both **Statement I** and **Statement II** are true · Official NTA final key

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Q28 JEE Main 2026 · 21 Jan · Shift 2 MCQ

Match List - I with List - II.

List - I Pair of Compounds	List - II Type of Isomers
A. 2-Methylpropene and but-1-ene	I. Stereoisomers
B. Cis-but-2-ene and trans-but-2-ene	II. Position isomers
C. 2-Butanol and diethyl ether	III. Chain isomers
D. But-1-ene and but-2-ene	IV. Functional group isomers

Choose the **correct** answer from the options given below :

(A) A-II, B-I, C-IV, D-III
(B) A-I, B-IV, C-III, D-II
(C) A-III, B-I, C-II, D-IV
(D) A-III, B-I, C-IV, D-II

Answer: (D) A-III, B-I, C-IV, D-II · Official NTA final key

Q29 JEE Main 2025 · 8 Apr · Shift 2 MCQ

Match the LIST-I with LIST-II

LIST-I	LIST-II
A. Carbocation	I. Species that can supply a pair of electrons.
B. C-Free radical	II. Species that can receive a pair of electrons.
C. Nucleophile	III. sp^2 hybridized carbon with empty p-orbital.
D. Electrophile	IV sp^2/sp^3 hybridized carbon with one unpaired electron.

Choose the correct answer from the options given below:

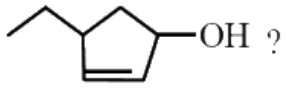
(A) A-IV, B-II, C-III, D-I
(B) A-III, B-IV, C-I, D-II
(C) A-II, B-III, C-II, D-IV
(D) A-III, B-IV, C-II, D-I

Answer: (B) A-III, B-IV, C-I, D-II · Key from source paper

Q30 JEE Main 2025 · 8 Apr · Shift 2 MCQ

What is the correct IUPAC name of *(see the figure above)* ?

8. What is the correct IUPAC name of



?

(1) 1-Ethyl-3-hydroxycyclopent-2-ene
(2) 4-Ethyl-1-hydroxycyclopent-2-ene
(3) 1-Ethylcyclopent-2-en-3-ol
(4) 4-Ethylcyclopent-2-en-1-ol

(A) 1-Ethyl-3-hydroxycyclopent-2-ene
(B) 4-Ethyl-1-hydroxycyclopent-2-ene
(C) 1-Ethylcyclopent-2-en-3-ol
(D) 4-Ethylcyclopent-2-en-1-ol

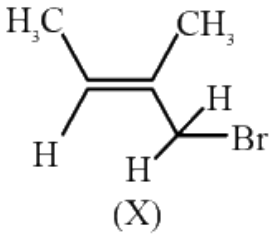
Answer: (D) 4-Ethylcyclopent-2-en-1-ol · Key from source paper

Q31 JEE Main 2025 · 7 Apr · Shift 1 MCQ

Which of the following is the correct IUPAC name of given organic compound (X) ?

(see the figure above)

18. Which of the following is the correct IUPAC name of given organic compound (X) ?



(X)

(1) 1-Bromo-2-methylbut-2-ene
(2) 4-Bromo-3-methylbut-2-ene
(3) 2-Bromo-2-methylbut-2-ene
(4) 3-Bromo-3-methylprop-2-ene

(A) 1-Bromo-2-methylbut-2-ene
(B) 4-Bromo-3-methylbut-2-ene
(C) 2-Bromo-2-methylbut-2-ene
(D) 3-Bromo-3-methylprop-2-ene

Answer: (A) 1-Bromo-2-methylbut-2-ene · Key from source paper

Q32 JEE Main 2025 · 7 Apr · Shift 2 MCQ

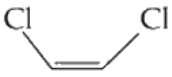
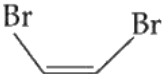
Given below are two statements :

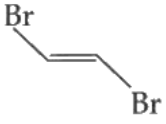
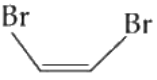
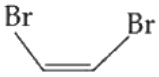
Statement (I) : *(see the figure above)* is more polar than *(see the figure above)*

Statement (II) : Boiling point of *(see the figure above)* is lower than *(see the figure above)* but it is more polar than *(see the figure above)*

In the light of the above statements, choose the most appropriate answer from the options given below :

7. Given below are two statements :

Statement (I) :  is more polar than 

Statement (II) : Boiling point of  is lower than  but it is more polar than 

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are incorrect
(2) Statement I is correct but Statement II is incorrect
(3) Statement I is incorrect but Statement II is correct
(4) Both Statement I and Statement II are correct

(A) Both Statement I and Statement II are incorrect
(B) Statement I is correct but Statement II is incorrect
(C) Statement I is incorrect but Statement II is correct
(D) Both Statement I and Statement II are correct

Answer: (B) Statement I is correct but Statement II is incorrect · Key from source paper

Q33 JEE Main 2025 · 4 Apr · Shift 1 MCQ

Given below are two statements.

Statement I: The dipole moment of $\overset{4}{C}H_3 - \overset{3}{C}H = \overset{2}{C}H - \overset{1}{C}H = O$ is greater than $\overset{4}{C}H_3 - \overset{3}{C}H_2 - \overset{2}{C}H_2 - \overset{1}{C}H = O$

Statement II: $C_1 - C_2$ bond length of $CH_3 - CH = CH - CH = O$ is greater than $C_1 - C_2$ bond length of $CH_3 - CH_2 - CH_2 - CH = O$

In the light of the above statements, choose the correct answer from the options given below:

(A) Statement I is true but Statement II is false
(B) Both Statement I and Statement II are false
(C) Statement I is false but Statement II is true
(D) Both Statement I and Statement II are true

Answer: (A) Statement I is true but Statement II is false · Key from source paper

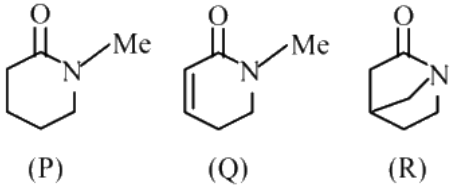
Q34 JEE Main 2025 · 4 Apr · Shift 2 MCQ

The correct order of basicity for the following molecules is :

(see the figure above)

CHEMISTRY **04-04-2025 (EVENING SESSION)**

4. The correct order of basicity for the following molecules is :



(P) (Q) (R)

(1) R > P > Q (2) R > Q > P (3) P > Q > R (4) Q > P > R

(A) R > P > Q
(B) R > Q > P
(C) P > Q > R
(D) Q > P > R

Answer: (B) R > Q > P · Key from source paper

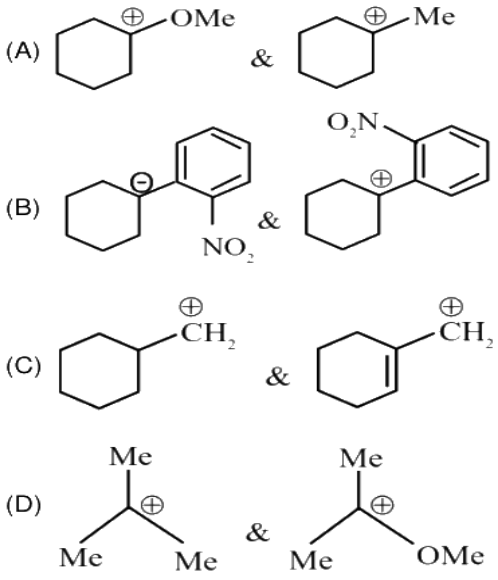
Q35 JEE Main 2025 · 4 Apr · Shift 2 MCQ

In which pairs, the first ion is more stable than the second?

(see the figure above)

CHEMISTRY **04-04-2025 (EVENING SESSION)**

18. In which pairs, the first ion is more stable than the second?



(1) (A) & (B) only (2) (B) & (D) only (3) (A) & (C) only (4) (B) & (C) only

A (A) & (B) only
B (B) & (D) only
C (A) & (C) only
D (B) & (C) only

Answer: (A) (A) & (B) only · Key from source paper

Q36 JEE Main 2025 · 4 Apr · Shift 2 MCQ

The IUPAC name of the following compound is :

$HC \equiv C - CH_2 - CH(OH) - CH_2 - CH = CH_2$ (the OH hangs above the CH)

A 4-Hydroxyhept-1-en-6-yne
B 4-Hydroxyhept-6-en-1-yne
C Hept-1-en-6-yn-4-ol
D Hept-6-en-1-yn-4-ol

Answer: (C) Hept-1-en-6-yn-4-ol · Key from source paper

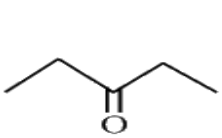
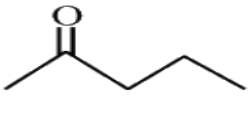
Q37 JEE Main 2025 · 3 Apr · Shift 1 MCQ

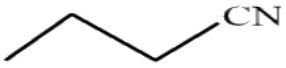
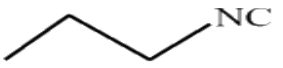
Identify the correct statements from the following.

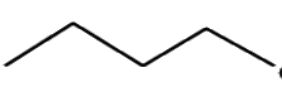
(see the figure above)

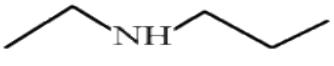
Choose the correct answer from the options given below:

9. Identify the correct statements from the following.

(A)  and  are metamers

(B)  and  are functional isomers

(C)  and  are position isomers

(D)  and  are homologous

Choose the correct answer from the options given below:

(1) A & B Only (2) B & C Only

(3) A, B & C Only (4) C & D Only

(A) A & B Only

(B) B & C Only

(C) A, B & C Only

(D) C & D Only

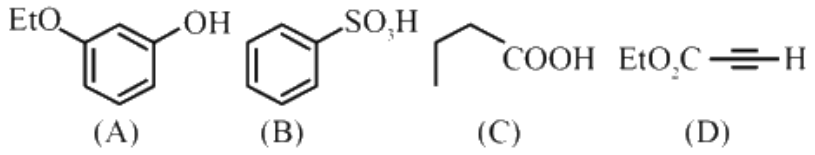
Answer: (A) A & B Only · Key from source paper

Q38 JEE Main 2025 · 3 Apr · Shift 1 MCQ

The least acidic compound, among the following is:

(see the figure above)

13. The least acidic compound, among the following is:



(A) (B) (C) (D)

(1) D (2) A (3) C (4) B

(A) D

(B) A

(C) C

(D) B

Answer: (A) D · Key from source paper

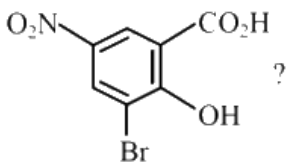
Q39 JEE Main 2025 · 3 Apr · Shift 2 MCQ

What is the correct IUPAC name of

(see the figure above)

?

17. What is the correct IUPAC name of



?

(1) 3-Bromo-2-hydroxy-5-nitrobenzoic acid

(2) 2-Hydroxy-3-bromo-5-nitrobenzoic acid

(3) 5-Nitro-3-bromo-2-hydroxybenzoic acid

(4) 3-Bromo-4-hydroxy-1-nitrobenzoic acid

(A) 3-Bromo-2-hydroxy-5-nitrobenzoic acid

(B) 2-Hydroxy-3-bromo-5-nitrobenzoic acid

(C) 5-Nitro-3-bromo-2-hydroxybenzoic acid

(D) 3-Bromo-4-hydroxy-1-nitrobenzoic acid

Answer: (A) 3-Bromo-2-hydroxy-5-nitrobenzoic acid · Key from source paper

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Q40 JEE Main 2025 · 3 Apr · Shift 2 MCQ

Given below are two statements:

Statement I : Hyperconjugation is not a permanent effect.

Statement II : In general, greater the number of alkyl groups attached to a positively charged Cation, greater is the hyperconjugation interaction and stabilization of the cation.

In the light of the above statements, choose the correct answer from the options given below

(A) Both Statement I and Statement II are false

(B) Statement I is false but Statement II is true

(C) Statement I is true but Statement II is false

(D) Both Statement I and Statement II are true

Answer: (B) Statement I is false but Statement II is true · Key from source paper

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Q41 JEE Main 2025 · 3 Apr · Shift 2 Numerical

The total number of structural isomers possible for the substituted benzene derivatives with the molecular formula C_9H_{12} is _____ .

Numerical value type: the answer is a number.

Answer: 8. · Key from source paper

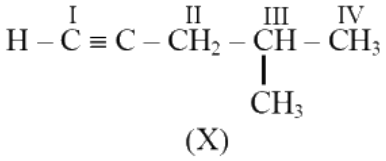
Q42 JEE Main 2025 · 2 Apr · Shift 1 MCQ

Consider the following compound (X)

(see the figure above)

The most stable and least stable carbon radicals, respectively, produced by homolytic cleavage of corresponding C - H bond are :

1. Consider the following compound (X)



(X)

The most stable and least stable carbon radicals, respectively, produced by homolytic cleavage of corresponding C - H bond are :

(1) II, I (2) II, IV (3) I, IV (4) III, II

(A) II, I

(B) II, IV

(C) I, IV

(D) III, II

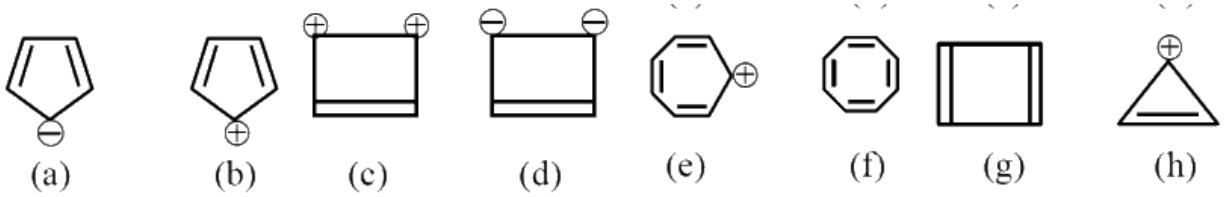
Answer: (A) II, I · Key from source paper

Q43 JEE Main 2025 · 2 Apr · Shift 1 MCQ

Designate whether each of the following compounds is aromatic or not aromatic.

(see the figure above)

14. Designate whether each of the following compounds is aromatic or not aromatic.



(a) (b) (c) (d) (e) (f) (g) (h)

(1) b, e, f, g aromatic and a, c, d, h not aromatic

(2) e, g aromatic and a, b, c, d, f, h not aromatic

(3) a, b, c, d aromatic and e, f, g, h not aromatic

(4) a, c, d, e, h aromatic and b, f, g not aromatic

(A) b, e, f, g aromatic and a, c, d, h not aromatic

(B) e, g aromatic and a, b, c, d, f, h not aromatic

(C) a, b, c, d aromatic and e, f, g, h not aromatic

(D) a, c, d, e, h aromatic and b, f, g not aromatic

Answer: (D) a, c, d, e, h aromatic and b, f, g not aromatic · Key from source paper

Q44 JEE Main 2025 · 2 Apr · Shift 2 MCQ

In 3,3-dimethylhex-1-en-4-yne, there are _____ sp^3, _____ sp^2 and _____ sp hybridised carbon atoms respectively.

(A) 2, 4, 2
(B) 4, 2, 2
(C) 2, 2, 4
(D) 3 ,3, 2

Answer: (B) 4, 2, 2 · Key from source paper

Q45 JEE Main 2025 · 29 Jan · Shift 1 MCQ

Total number of nucleophiles from the following is : NH_3, PhSH, $(H_3C)_2S$, $H_2C=CH_2$, $\overset{\ominus}{O}H$, $H_3O^{\oplus}$, $(CH_3)_2CO$, $\rightleftharpoons NCH_3$

(A) 7
(B) 4
(C) 6
(D) 5

Answer: (D) 5 · Key from source paper

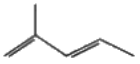
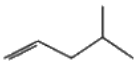
Q46 JEE Main 2025 · 29 Jan · Shift 1 MCQ

Match List - I with List - II.

List - I (Structure)		List - II (IUPAC Name)	
(A)	$H_3C-CH_2-CH-CH_2-CH-C_2H_5$ with C_2H_5 below the first CH and CH_3 below the second CH	(I)	4-Methylpent-1-ene
(B)	$(CH_3)_2C(C_3H_7)_2$	(II)	3-Ethyl-5-methylheptane
(C)	*(see the figure above)* a zigzag chain with a double bond at the left end, a methyl branch on the second carbon (a second double bond further along)	(III)	4,4-Dimethylheptane
(D)	*(see the figure above)* a zigzag chain with a double bond at the left end and a methyl branch on the third carbon	(IV)	2-Methyl-1,3-pentadiene

Choose the correct answer from the options given below :

Q63.

List - I (Structure)		List - II (IUPAC Name)	
(A)	$H_3C-CH_2-\underset{\underset{C_2H_5}{\vert}}{CH}-CH_2-\underset{\underset{CH_3}{\vert}}{CH}-C_2H_5$	(I)	4-Methylpent-1-ene
(B)	$(CH_3)_2C\ (C_3H_7)_2$	(II)	3-Ethyl-5-methylheptane
(C)		(III)	4,4-Dimethylheptane
(D)		(IV)	2-Methyl-1,3-pentadiene

Match List - I with List - II.

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
(2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
(3) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(4) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

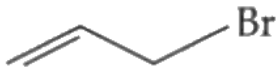
(A) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
(B) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
(C) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(D) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

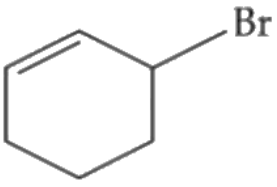
Answer: (A) (A)-(II), (B)-(III), (C)-(IV), (D)-(I) · Key from source paper

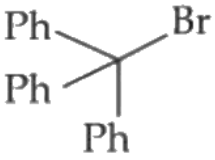
Q47 JEE Main 2025 · 29 Jan · Shift 2 MCQ

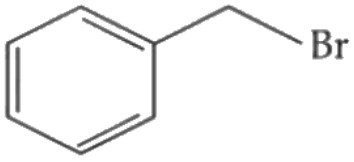
Which among the following halides will generate the most stable carbocation in the nucleophilic substitution reaction?

Q66. Which among the following halides will generate the most stable carbocation in the nucleophilic substitution reaction?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q48 JEE Main 2025 · 29 Jan · Shift 2 Numerical

Isomeric hydrocarbons $\rightarrow$ negative Baeyer's test (Molecular formula C_9H_{12}) The total number of isomers from above with four different non-aliphatic substitution sites is -

Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

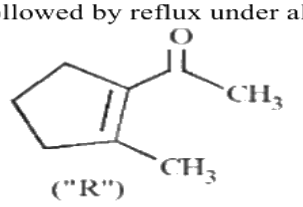
Q49 JEE Main 2025 · 28 Jan · Shift 1 MCQ

A molecule (" P ") on treatment with acid undergoes rearrangement and gives ("Q"). ("Q") on ozonolysis followed by reflux under alkaline condition gives (" R "). The structure of (" R ") is given below.

(see the figure above)

The structure of (" **P**") is

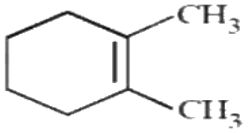
Q54. A molecule (" P ") on treatment with acid undergoes rearrangement and gives ("Q"). ("Q") on ozonolysis followed by reflux under alkaline condition gives (" R "). The structure of (" R ") is given below.



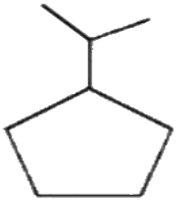
("R")

The structure of (" **P**") is

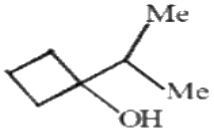
(1)



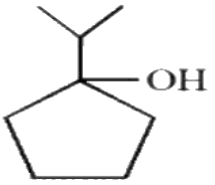
(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

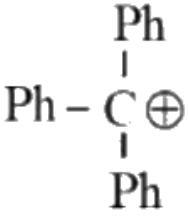
Answer: (D) · Key from source paper

Q50 JEE Main 2025 · 28 Jan · Shift 1 MCQ

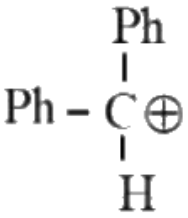
The correct order of stability of following carbocations is :

(see the figure above)

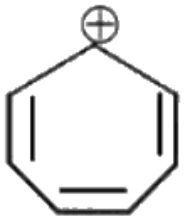
Q55. The correct order of stability of following carbocations is :



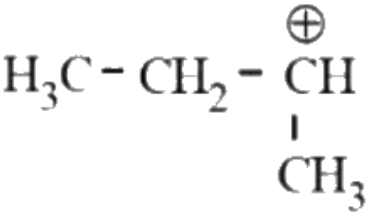
A



B



C



D

(1) C > B > A > D
(2) A > B > C > D
(3) B > C > A > D
(4) C > A > B > D

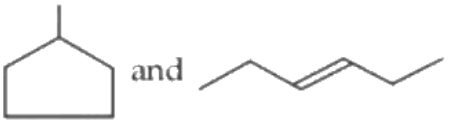
(A) C > B > A > D
(B) A > B > C > D
(C) B > C > A > D
(D) C > A > B > D

Answer: (D) C > A > B > D · Key from source paper

Q51 JEE Main 2025 · 28 Jan · Shift 2 MCQ

see figure

Q52.

Given below are two statements : **Statement (I) :**  are isomeric compounds.**Statement (II) :**  are functional group isomers.

(1) Both **Statement (I)** and **Statement (II)** are false. (2) Both **Statement (I)** and **Statement (II)** are true.
(3) **Statement (I)** is false but **Statement (II)** is true. (4) **Statement (I)** is true but **Statement (II)** is false.

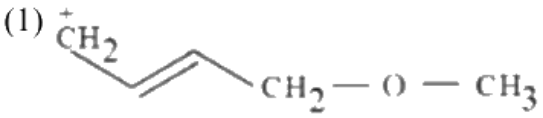
(A) Both Statement (I) and Statement (II) are false.
(B) Both Statement (I) and Statement (II) are true.
(C) Statement (I) is false but Statement (II) is true.
(D) Statement (I) is true but Statement (II) is false.

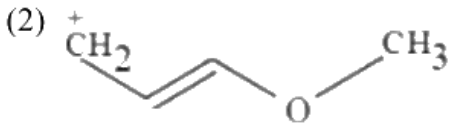
Answer: (B) Both Statement (I) and Statement (II) are true. · Key from source paper

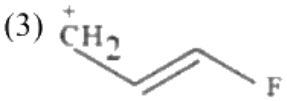
Q52 JEE Main 2025 · 24 Jan · Shift 1 MCQ

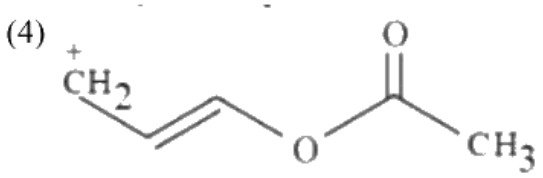
Which one of the carbocations from the following is most stable?

Q65. Which one of the carbocations from the following is most stable?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (B) · Key from source paper

Q53 JEE Main 2025 · 24 Jan · Shift 2 Numerical

The possible number of stereoisomers for 5-phenylpent-4-en-2-ol is _____

Numerical value type: the answer is a number.

Answer: 4. · Key from source paper

Q54 JEE Main 2025 · 24 Jan · Shift 2 Numerical

The hydrocarbon (X) with molar mass 80 g mol^{-1} and 90% carbon has _____ degree of unsaturation.

Numerical value type: the answer is a number.

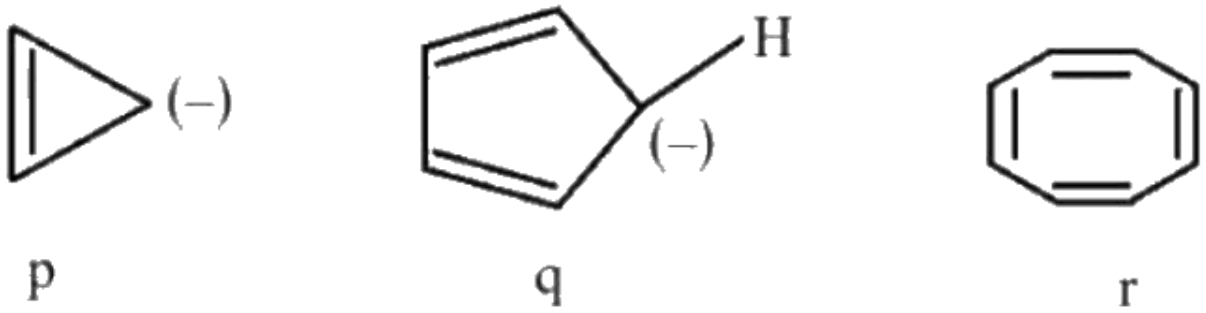
Answer: 3. · Key from source paper

Q55 JEE Main 2025 · 23 Jan · Shift 1 MCQ

The correct stability order of the following species/molecules is:

(see the figure above)

Q70. The correct stability order of the following species/molecules is:



p q r

(1) $q > r > p$
(2) $r > q > p$
(3) $q > p > r$
(4) p > q > r

(A) $q > r > p$
(B) $r > q > p$
(C) $q > p > r$
(D) p > q > r

Answer: (A) $q > r > p$ · Key from source paper

Q56 JEE Main 2025 · 22 Jan · Shift 1 MCQ

The incorrect statements regarding geometrical isomerism are : (A) Propene shows geometrical isomerism. (B) Trans isomer has identical atoms/groups on the opposite sides of the double bond. (C) Cis-but-2-ene has higher dipole moment than trans-but-2-ene. (D) 2-methylbut-2-ene shows two geometrical isomers. (E) Trans-isomer has lower melting point than cis isomer. Choose the correct answer from the options given below :

(A) (A) and (E) Only
(B) (A), (D) and (E) Only
(C) (B) and (C) Only
(D) (C), (D) and (E) Only

Answer: (B) (A), (D) and (E) Only · Key from source paper

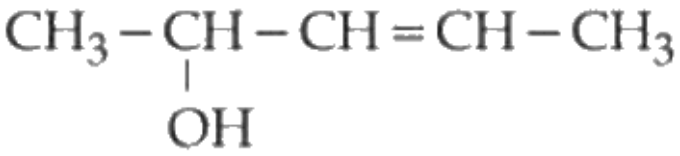
Q57 JEE Main 2025 · 22 Jan · Shift 1 MCQ

How many different stereoisomers are possible for the given molecule?

(see the figure above)

EdLoop JEE

Q64. How many different stereoisomers are possible for the given molecule?



(1) 2
(2) 1
(3) 4
(4) 3

(A) 2
(B) 1
(C) 4
(D) 3

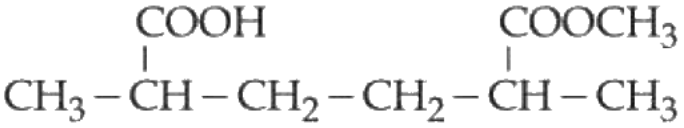
Answer: (C) 4 · Key from source paper

Q58 JEE Main 2025 · 22 Jan · Shift 1 MCQ

The IUPAC name of the following compound is :

(see the figure above)

Q67.



The IUPAC name of the following compound is :
(1) Methyl-6-carboxy-2,5-dimethylhexanoate.
(2) 2-Carboxy-5-methoxycarbonylhexane.
(3) 6-Methoxycarbonyl-2,5-dimethylhexanoic acid.
(4) Methyl-5-carboxy-2-methylhexanoate.

(A) Methyl-6-carboxy-2,5-dimethylhexanoate.
(B) 2-Carboxy-5-methoxycarbonylhexane.
(C) 6-Methoxycarbonyl-2,5-dimethylhexanoic acid.
(D) Methyl-5-carboxy-2-methylhexanoate.

Answer: (C) 6-Methoxycarbonyl-2,5-dimethylhexanoic acid. · Key from source paper

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Q59 JEE Main 2025 · 22 Jan · Shift 2 MCQ

The alkane from below having two secondary hydrogens is :

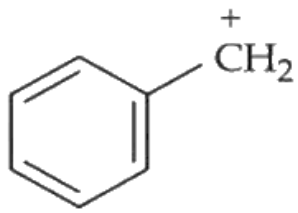
(A) 4-Ethyl-3,4-dimethyloctane
(B) 2,2,3,3-Tetramethylpentane
(C) 2,2,4,5-Tetramethylheptane
(D) 2,2,4,4-Tetramethylhexane

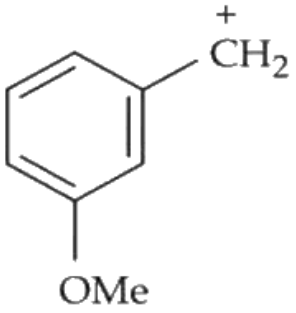
Answer: (B) 2,2,3,3-Tetramethylpentane · Key from source paper

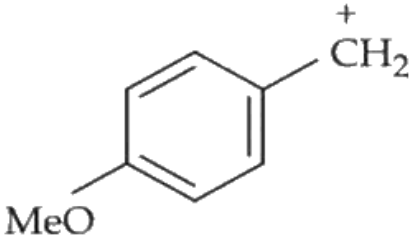
Q60 JEE Main 2025 · 22 Jan · Shift 2 MCQ

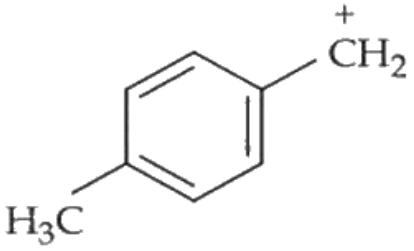
The most stable carbocation from the following is :

Q67. The most stable carbocation from the following is :

(1) 

(2) 

(3) 

(4) 

A *see figure*

B *see figure*

C *see figure*

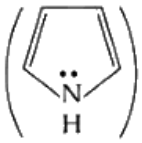
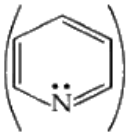
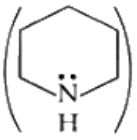
D *see figure*

Answer: (C) · Key from source paper

Q61 JEE Main 2024 · 9 Apr · Shift 1 MCQ

Correct order of basic strength of Pyrrole *(see the figure above)*, Pyridine *(see the figure above)*, and Piperidine *(see the figure above)* is:

Q36.

Correct order of basic strength of Pyrrole , Pyridine , and Piperidine  is:

(1) Pyrrole > Piperidine > Pyridine
(2) Pyrrole > Pyridine > Piperidine
(3) Pyridine > Piperidine > Pyrrole
(4) Piperidine > Pyridine > Pyrrole

(A) Pyrrole > Piperidine > Pyridine
(B) Pyrrole > Pyridine > Piperidine
(C) Pyridine > Piperidine > Pyrrole
(D) Piperidine > Pyridine > Pyrrole

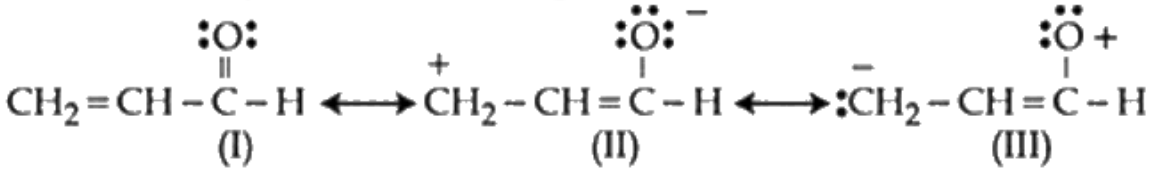
Answer: (D) Piperidine > Pyridine > Pyrrole · Key from source paper

Q62 JEE Main 2024 · 9 Apr · Shift 1 MCQ

Relative stability of the contributing structures is :

(see the figure above)

Q38. Relative stability of the contributing structures is :



(1) (I) > (II) > (III)
(2) (I) > (III) > (II)
(3) (II) > (I) > (III)
(4) (III) > (II) > (I)

(A) (I) > (II) > (III)
(B) (I) > (III) > (II)
(C) (II) > (I) > (III)
(D) (III) > (II) > (I)

Answer: (A) (I) > (II) > (III) · Key from source paper

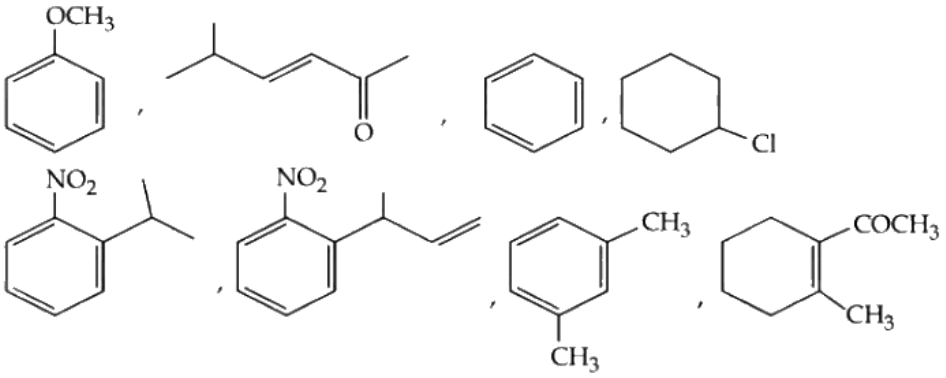
Q63 JEE Main 2024 · 9 Apr · Shift 1 Numerical

How many compounds among the following compounds show inductive, mesomeric as well as

(see the figure above)

hyperconjugation effects?

Q55. How many compounds among the following compounds show inductive, mesomeric as well as



hyperconjugation effects?

Numerical value type: the answer is a number.

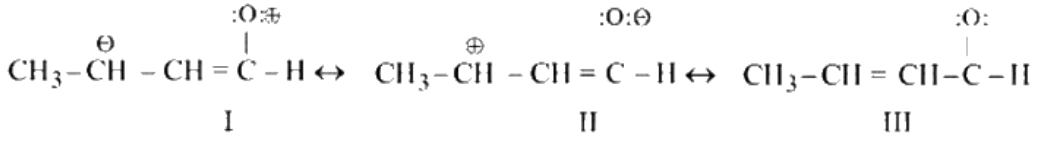
Answer: 4. · Key from source paper

Q64 JEE Main 2024 · 9 Apr · Shift 2 MCQ

The correct stability order of the following resonance structures of $CH_3 - CH = CH - CHO$ is

(see the figure above)

Q38. The correct stability order of the following resonance structures of $CH_3 - CH = CH - CHO$ is



(1) I > II > III
(2) II > III > I
(3) II > I > III
(4) III > II > I

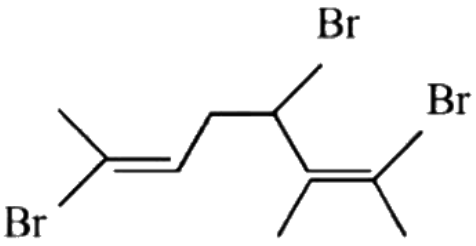
(A) I > II > III
(B) II > III > I
(C) II > I > III
(D) III > II > I

Answer: (D) III > II > I · Key from source paper

Q65 JEE Main 2024 · 9 Apr · Shift 2 MCQ

see figure

Q39.



Total number of stereo isomers possible for the given structure :

(1) 2 (2) 4

(3) 3 (4) 8

(A) 2

(B) 4

(C) 3

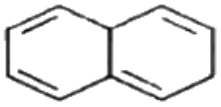
(D) 8

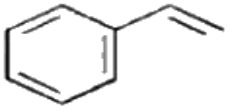
Answer: (D) 8 · Key from source paper

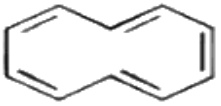
Q66 JEE Main 2024 · 8 Apr · Shift 1 MCQ

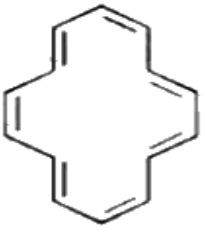
see figure

Q40.

A. 

B. 

C. 

D. 

Which of the following are aromatic?

(1) A and C only (2) B and D only

(3) C and D only (4) A and B only

(A) A and C only

(B) B and D only

(C) C and D only

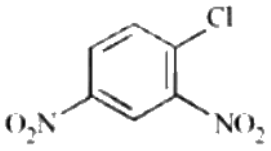
(D) A and B only

Answer: (B) B and D only · Key from source paper

Q67 JEE Main 2024 · 8 Apr · Shift 1 MCQ

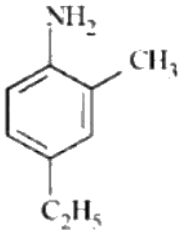
Given below are two statements: Statements I: *(see the figure above)* IUPAC name of Compound A is 4-chloro-1,3-dinitrobenzene. Statements II: *(see the figure above)* IUPAC name of Compound B is 4-ethyl-2-methylaniline. In the light of the above statements, choose the most appropriate answer from the options given below:

Q41.



Compound A

Given below are two statements: Statements I:



Compound B

IUPAC name of Compound A is 4-chloro-1,3-dinitrobenzene. Statements II: IUPAC name of Compound B is 4-ethyl-2-methylaniline. In the light of the above statements, choose the most appropriate answer from the options given below:

(1) Both Statement I and Statement II are incorrect.
(2) Both Statement I and Statement II are correct.
(3) Statement I is correct but Statement II is incorrect.
(4) Statement I is incorrect but Statement II is correct.

(A) Both Statement I and Statement II are incorrect.
(B) Both Statement I and Statement II are correct.
(C) Statement I is correct but Statement II is incorrect.
(D) Statement I is incorrect but Statement II is correct.

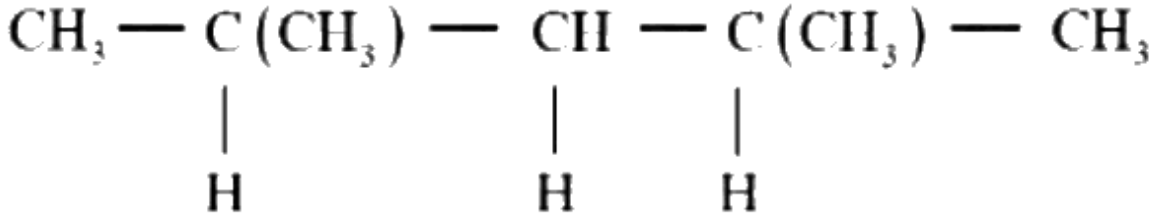
Answer: (D) Statement I is incorrect but Statement II is correct. · Key from source paper

Q68 JEE Main 2024 · 8 Apr · Shift 1 MCQ

In the given compound, the number of 2° carbon atom /s is _____ .

(see the figure above)

Q42. In the given compound, the number of 2° carbon atom /s is _____.



(1) Four
(2) Two
(3) One
(4) Three

(A) Four
(B) Two
(C) One
(D) Three

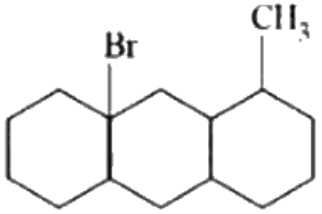
Answer: (C) One · Key from source paper

Q69 JEE Main 2024 · 8 Apr · Shift 1 · Numerical

The number of optical isomers in following compound is: _____

(see the figure above)

Q54.



The number of optical isomers in following compound is: _____

Numerical value type: the answer is a number.

Answer: 32. · Key from source paper

Q70 JEE Main 2024 · 8 Apr · Shift 2 · MCQ

The shape of carbocation is :

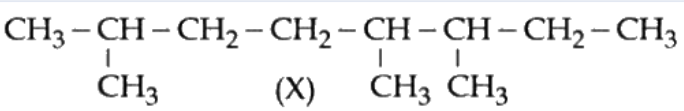
(A) diagonal pyramidal
(B) trigonal planar
(C) tetrahedral
(D) diagonal

Answer: (B) trigonal planar · Key from source paper

Q71 JEE Main 2024 · 8 Apr · Shift 2 · MCQ

see figure

Q37.



IUPAC name of following hydrocarbon (X) is :

(1) 2-Ethyl-3,6-dimethylheptane
(2) 2,5,6-Trimethyloctane
(3) 3,4,7-Trimethyloctane
(4) 2-Ethyl-2,6-diethylheptane

(A) 2-Ethyl-3,6-dimethylheptane
(B) 2,5,6-Trimethyloctane
(C) 3,4,7-Trimethyloctane
(D) 2-Ethyl-2,6-diethylheptane

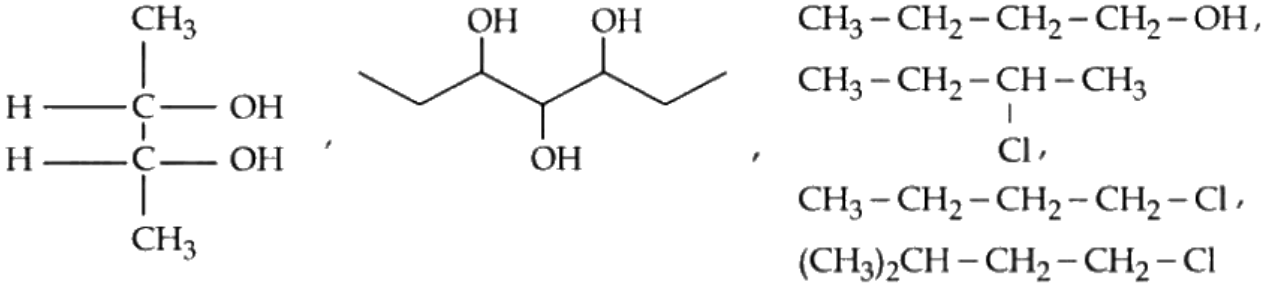
Answer: (B) 2,5,6-Trimethyloctane · Key from source paper

Q72 JEE Main 2024 · 8 Apr · Shift 2 Numerical

Total number of optically active compounds from the following is _____

(see the figure above)

Q54. Total number of optically active compounds from the following is _____



Numerical value type: the answer is a number.

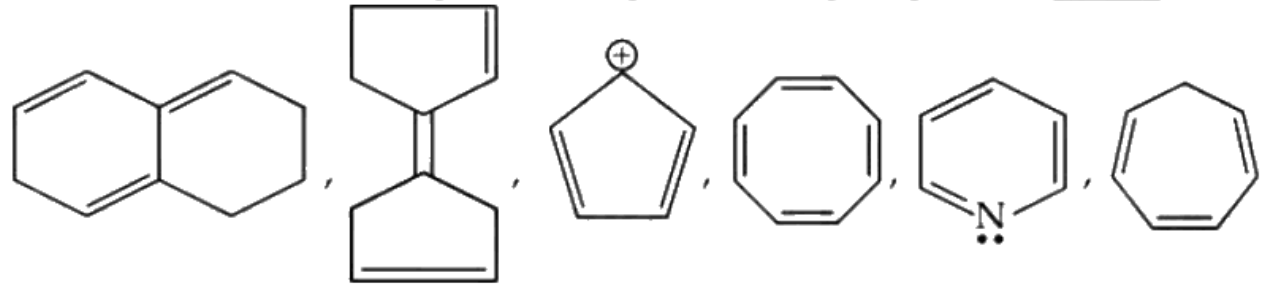
Answer: 1. · Key from source paper

Q73 JEE Main 2024 · 8 Apr · Shift 2 Numerical

Total number of aromatic compounds among the following compounds is _____

(see the figure above)

Q55. Total number of aromatic compounds among the following compounds is _____.



Numerical value type: the answer is a number.

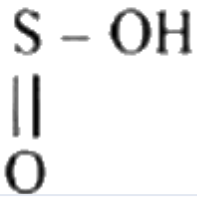
Answer: 1. · Key from source paper

Q74 JEE Main 2024 · 6 Apr · Shift 1 MCQ

Functional group present in sulphonic acids is :

Q38. Functional group present in sulphonic acids is :

(1) $-SO_4H$ (2) $-SO_3H$

(3)  (4) $-SO_2$

(A) $-SO_4H$

(B) $-SO_3H$

(C) *see figure*

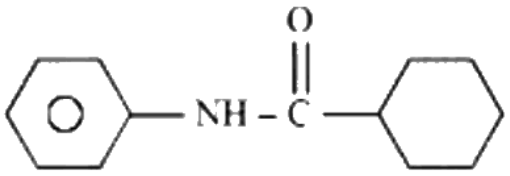
(D) $-SO_2$

Answer: (B) $-SO_3H$ · Key from source paper

Q75 JEE Main 2024 · 6 Apr · Shift 1 MCQ

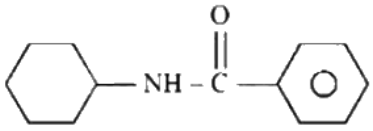
see figure

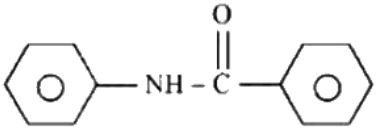
Q40.

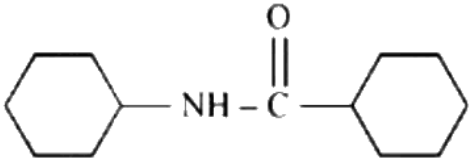


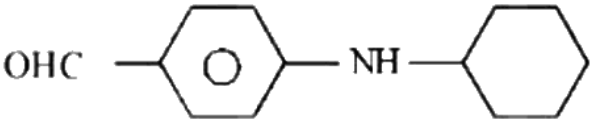
(X)

Which of the following is metamer of the given compound (X) ?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (A) · Key from source paper

Q76 JEE Main 2024 · 6 Apr · Shift 2 MCQ

The incorrect statement regarding the geometrical isomers of 2-butene is :

(A) cis-2-butene and trans-2-butene are not interconvertible at room temperature.
(B) cis-2-butene and trans-2-butene are stereoisomers.
(C) cis-2-butene has less dipole moment than trans-2-butene.
(D) trans-2-butene is more stable than cis-2-butene.

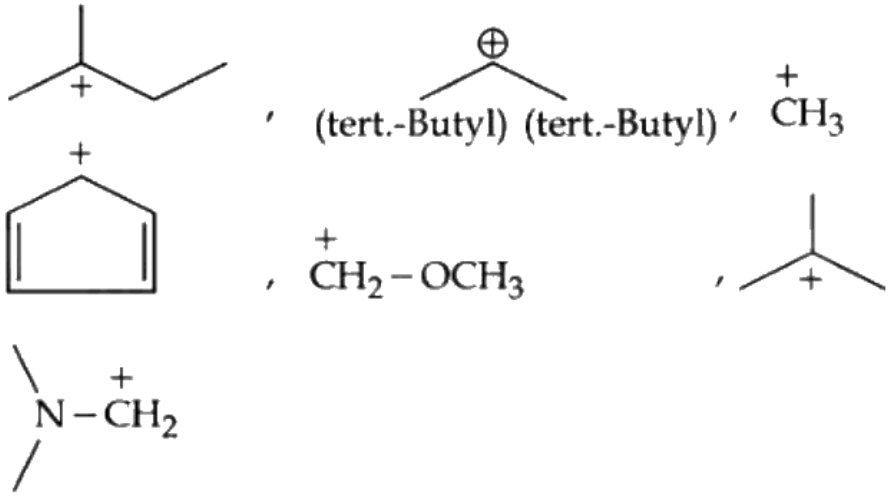
Answer: (C) cis-2-butene has less dipole moment than trans-2-butene. · Key from source paper

Q77 JEE Main 2024 · 6 Apr · Shift 2 Numerical

Number of carbocations from the following that are not stabilized by hyperconjugation is _____

(see the figure above)

Q57. Number of carbocations from the following that are not stabilized by hyperconjugation is _____



Numerical value type: the answer is a number.

Answer: 5. · Key from source paper

Q78 JEE Main 2024 · 5 Apr · Shift 1 MCQ

Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R). Assertion (A) : Cis form of alkene is found to be more polar than the trans form. Reason (R): Dipole moment of trans isomer of 2-butene is zero. In the light of the above statements, choose the correct answer from the options given below :

(A) (A) is false but (R) is true
(B) Both (A) and (R) are true and (R) is the correct explanation of (A)
(C) (A) is true but (R) is false
(D) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)

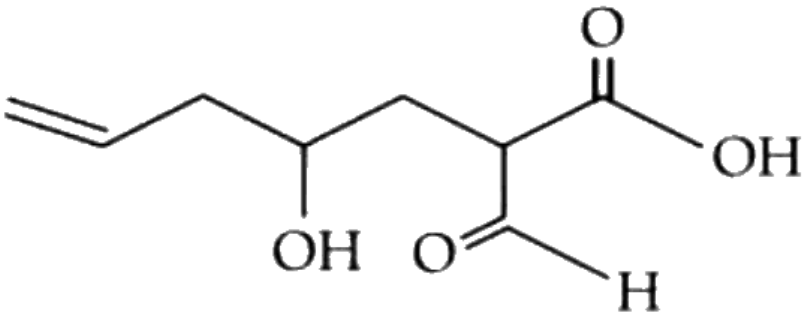
Answer: (B) Both (A) and (R) are true and (R) is the correct explanation of (A) · Key from source paper

Q79 JEE Main 2024 · 5 Apr · Shift 2 MCQ

The correct nomenclature for the following compound is :

(see the figure above)

Q37. The correct nomenclature for the following compound is :



(1) 2-formyl-4-hydroxyhept-7-enoic acid
(2) 2-formyl-4-hydroxyhept-6-enoic acid
(3) 2-carboxy-4-hydroxyhept-7-enal
(4) 2-carboxy-4-hydroxyhept-6-enal

(A) 2-formyl-4-hydroxyhept-7-enoic acid
(B) 2-formyl-4-hydroxyhept-6-enoic acid
(C) 2-carboxy-4-hydroxyhept-7-enal
(D) 2-carboxy-4-hydroxyhept-6-enal

Answer: (B) 2-formyl-4-hydroxyhept-6-enoic acid · Key from source paper

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Q80 JEE Main 2024 · 5 Apr · Shift 2 MCQ

Match List I with List II

List - I (Pair of compounds)	List - II (Isomerism)
(A) n-propanol and Isopropanol	(I) Metamerism
(B) Methoxypropane and ethoxyethane	(II) Chain Isomerism
(C) Propanone and propanal	(III) Position Isomerism
(D) Neopentane and Isopentane	(IV) Functional Isomerism

Choose the correct answer from the options given below :

(A) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
(B) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
(C) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
(D) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Answer: (D) (A)-(III), (B)-(I), (C)-(IV), (D)-(II) · Key from source paper

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Q81 JEE Main 2024 · 4 Apr · Shift 1 MCQ

Match **List I** with **List II** :

List - I (Mechanism steps)	List - II (Effect)
(A) [drawing, see figure]	(I) – E effect
(B) [drawing, see figure]	(II) – R effect

(C) [drawing, see figure] (III) + E effect

(D) [drawing, see figure] (IV) + R effect

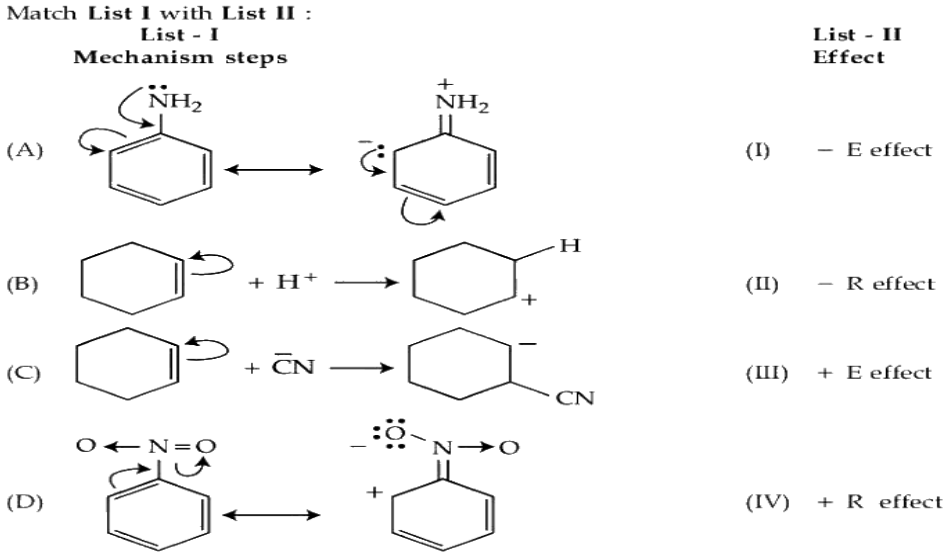
(see the figure above)

Match List I with List II :

Choose the correct answer from the options given below :

Q35.

Match **List I** with **List II** :



Choose the **correct** answer from the options given below :

Match List I with List II :

Choose the correct answer from the options given below :

(1) (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

(2) (A) - (I), (B) - (II), (C) - (IV), (D) - (III)

(3) (A) - (III), (B) - (I), (C) - (II), (D) - (IV)

(4) (A) - (II), (B) - (IV), (C) - (III), (D) - (I)

(A) (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

(B) (A) - (I), (B) - (II), (C) - (IV), (D) - (III)

(C) (A) - (III), (B) - (I), (C) - (II), (D) - (IV)

(D) (A) - (II), (B) - (IV), (C) - (III), (D) - (I)

Answer: (A) (A) - (IV), (B) - (III), (C) - (I), (D) - (II) · Key from source paper

Q82 JEE Main 2024 · 4 Apr · Shift 1 MCQ

Which among the following is incorrect statement?

(A) Electromeric effect dominates over inductive effect

(B) The electromeric effect is, temporary effect

(C) Hydrogen ion (H^+)shows negative electromeric effect

(D) The organic compound shows electromeric effect in the presence of the reagent only.

Answer: (C) Hydrogen ion (H^+)shows negative electromeric effect · Key from source paper

Q83 JEE Main 2024 · 4 Apr · Shift 1 MCQ

What will be the decreasing order of basic strength of the following conjugate bases?

^-OH, $R\overline{O}$, $CH_3CO\overline{O}$, $C\bar{l}$

(A) $R\overline{O} > {}^{-}OH > CH_3CO\overline{O} > C\bar{l}$
(B) $C\bar{l} > R\overline{O} > {}^{-}OH > CH_3CO\overline{O}$
(C) ${}^{-}OH > R\overline{O} > CH_3CO\overline{O} > C\bar{l}$
(D) $C\bar{l} > {}^{-}OH > R\overline{O} > CH_3CO\overline{O}$

Answer: (A) $R\overline{O} > {}^{-}OH > CH_3CO\overline{O} > C\bar{l}$ · Key from source paper

Q84 JEE Main 2024 · 4 Apr · Shift 1 Numerical

The number of different chain isomers for C_7H_{16} is

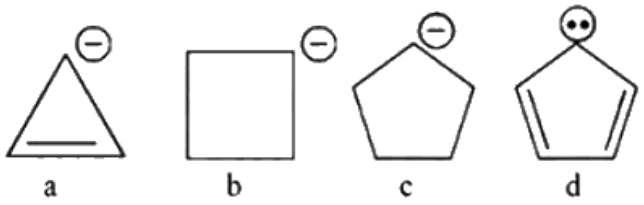
Numerical value type: the answer is a number.

Answer: 9. · Key from source paper

Q85 JEE Main 2024 · 4 Apr · Shift 2 MCQ

see figure

Q37.



Correct order of stability of carbanion is -

(1) $d > a > c > b$
(2) a > b > c > d
(3) $d > c > b > a$
(4) $c > b > d > a$

(A) $d > a > c > b$
(B) a > b > c > d
(C) $d > c > b > a$
(D) $c > b > d > a$

Answer: (C) $d > c > b > a$ · Key from source paper

Q86 JEE Main 2024 · 4 Apr · Shift 2 MCQ

Common name of Benzene - 1, 2 - diol is -

(A) catechol
(B) o-cresol
(C) quinol
(D) resorcinol

Answer: (A) catechol · Key from source paper

Q87 JEE Main 2024 · 4 Apr · Shift 2 Numerical

Vanillin compound obtained from vanilla beans, has total sum of oxygen atoms and π electrons is

_____

Numerical value type: the answer is a number.

Answer: 11. · Key from source paper

Q88 JEE Main 2024 · 1 Feb · Shift 1 MCQ

Ionic reactions with organic compounds proceed through:

(A) Homolytic bond cleavage (B) Heterolytic bond cleavage (C) Free radical formation (D) Primary free radical (E) Secondary free radical

Choose the correct answer from the options given below:

(A) (A) only
(B) (C) only
(C) (B) only
(D) (D) and (E) only

Answer: (C) (B) only · Key from source paper

Q89 JEE Main 2024 · 1 Feb · Shift 1 Numerical

Number of optical isomers possible for 2 – chlorobutane .....

Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

Q90 JEE Main 2024 · 1 Feb · Shift 2 MCQ

The functional group that shows negative resonance effect is:

(A) $-NH_2$
(B) -OH
(C) -COOH
(D) -OR

Answer: (C) -COOH · Key from source paper

Q91 JEE Main 2024 · 31 Jan · Shift 1 MCQ

A species having carbon with sextet of electrons and can act as electrophile is called

(A) carbon free radical
(B) carbanion
(C) carbocation
(D) pentavalent carbon

Answer: (C) carbocation · Key from source paper

Q92 JEE Main 2024 · 31 Jan · Shift 1 MCQ

Given below are two statements:

Statement I: IUPAC name of HO - CH_2 - $(CH_2)_3$ - CH_2 - COCH3 is 7-hydroxyheptan-2-one.

Statement II: 2-oxoheptan-7-ol is the correct IUPAC name for the above compound.

In the light of the above statements, Choose the most appropriate answer from the options given below:

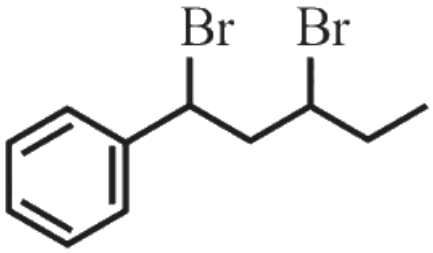
(A) Statement I is correct but Statement II is incorrect.
(B) Both Statement I and Statement II are incorrect.
(C) Both Statement I and Statement II are correct.
(D) Statement I is incorrect but Statement II is correct.

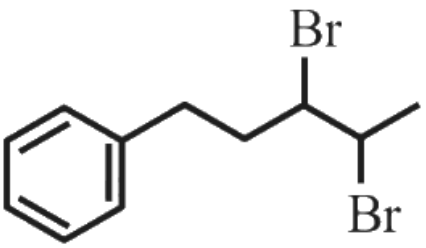
Answer: (A) Statement I is correct but Statement II is incorrect. · Key from source paper

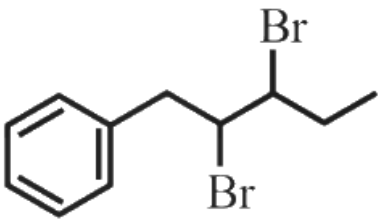
Q93 JEE Main 2024 · 31 Jan · Shift 2 MCQ

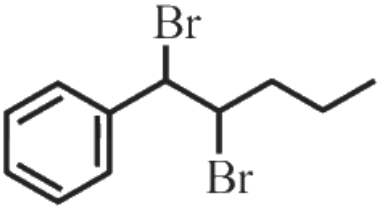
Identify structure of 2, 3-dibromo-1-phenylpentane.

Q38. Identify structure of 2, 3-dibromo-1-phenylpentane.

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

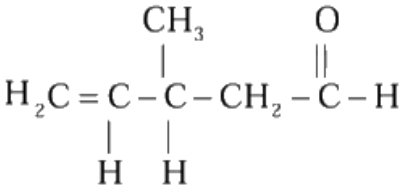
Answer: (C) · Key from source paper

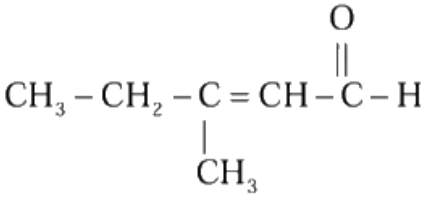
Q94 JEE Main 2024 · 30 Jan · Shift 1 MCQ

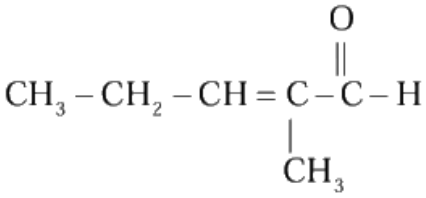
Structure of 4 – Methylpent – 2 – enal is:

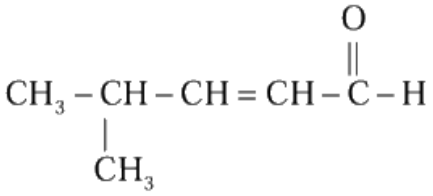
(see the figure above)

Q34. Structure of 4 – Methylpent – 2 – enal is:

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

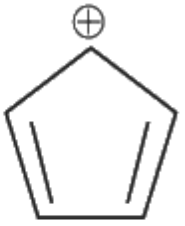
Q95 JEE Main 2024 · 30 Jan · Shift 1 MCQ

Which of the following molecule/species is most stable?

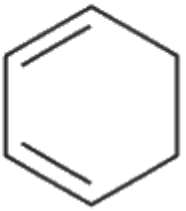
(see the figure above)

Q37. Which of the following molecule/species is most stable?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

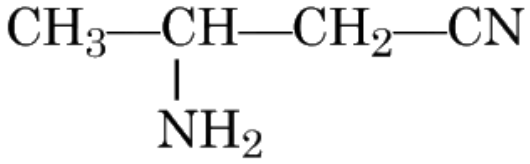
Answer: (A) · Key from source paper

Q96 JEE Main 2024 · 30 Jan · Shift 2 MCQ

IUPAC name of following compound is

(see the figure above)

Q34. IUPAC name of following compound is



(1) 2 – Aminopentanenitrile
(2) 2 – Aminobutanenitrile
(3) 3 – Aminobutanenitrile
(4) 3 – Aminopropanenitrile

(A) 2 – Aminopentanenitrile
(B) 2 – Aminobutanenitrile
(C) 3 – Aminobutanenitrile
(D) 3 – Aminopropanenitrile

Answer: (C) 3 – Aminobutanenitrile · Key from source paper

Q97 JEE Main 2024 · 30 Jan · Shift 2 MCQ

The correct stability order of carbocations is

(A) $(CH_3)_3C^+ > CH_3 - \overset{+}{C}H_2 > (CH_3)_2\overset{+}{C}H > \overset{+}{C}H_3$

(B) $\overset{+}{C}H_3 > (CH_3)_2\overset{+}{C}H > CH_3 - \overset{+}{C}H_2 > (CH_3)_3\overset{+}{C}$

(C) $(CH_3)_3\overset{+}{C} > (CH_3)_2\overset{+}{C}H > CH_3 - \overset{+}{C}H_2 > \overset{+}{C}H_3$

(D) $\overset{+}{C}H_3 > CH_3 - \overset{+}{C}H_2 > (CH_3)_2\overset{+}{C}H > (CH_3)_3C^+$

Answer: (C) $(CH_3)_3\overset{+}{C} > (CH_3)_2\overset{+}{C}H > CH_3 - \overset{+}{C}H_2 > \overset{+}{C}H_3$ · Key from source paper

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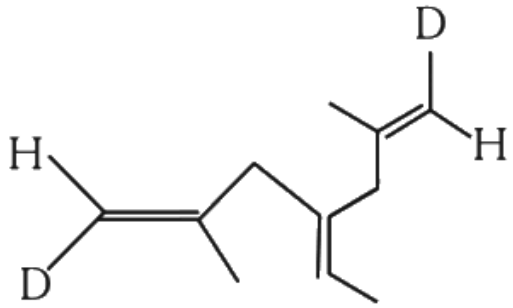
Q98 JEE Main 2024 · 30 Jan · Shift 2 Numerical

Number of geometrical isomers possible for the given structure is/are _____.

(see the figure above)

Q55. Number of geometrical isomers possible for the given structure is/are _____.



Numerical value type: the answer is a number.

Answer: 4. · Key from source paper

Q99 JEE Main 2024 · 30 Jan · Shift 2 Numerical

2 - chlorobutane + $Cl_2 \rightarrow C_4H_8Cl_2$ (isomers)

Total number of optically active isomers shown by $C_4H_8Cl_2$, obtained in the above reaction is _____.

Numerical value type: the answer is a number.

Answer: 6. · Key from source paper

Q100 JEE Main 2024 · 29 Jan · Shift 1 MCQ

The interaction between π bond and lone pair of electrons present on an adjacent atom is responsible for

(A) Hyperconjugation

(B) Inductive effect

(C) Electromeric effect

(D) Resonance effect

Answer: (D) Resonance effect · Key from source paper

Q101 JEE Main 2024 · 29 Jan · Shift 1 MCQ

The difference in energy between the actual structure and the lowest energy resonance structure for the given compound is:

(A) electromeric energy
(B) resonance energy
(C) ionization energy
(D) hyperconjugation energy

Answer: (B) resonance energy · Key from source paper

Q102 JEE Main 2024 · 29 Jan · Shift 1 Numerical

Number of compounds among the following which contain sulphur as heteroatom is _____.

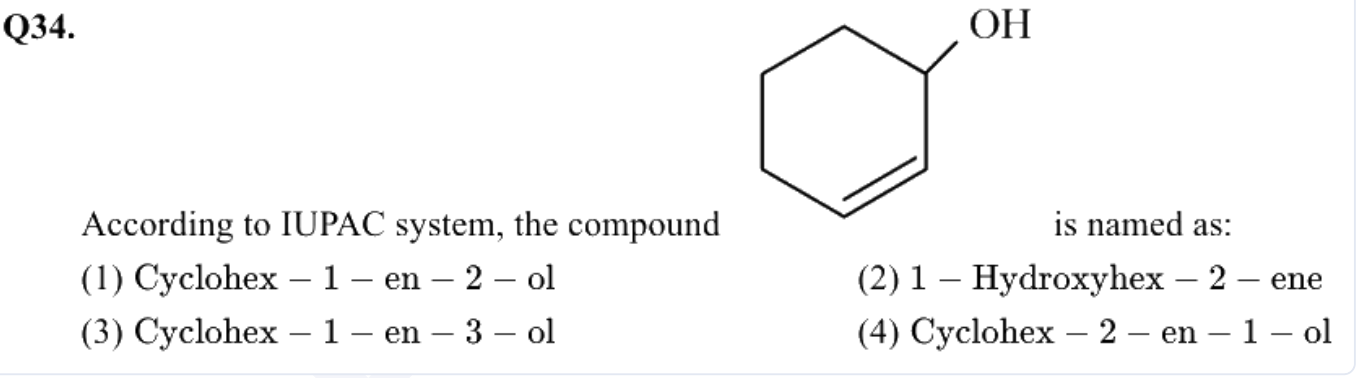
Furan, Thiophene, Pyridine, Pyrrole, Cysteine, Tyrosine

Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

Q103 JEE Main 2024 · 29 Jan · Shift 2 MCQ

According to IUPAC system, the compound *(see the figure above)* is named as:



(A) Cyclohex – 1 – en – 2 – ol
(B) 1 – Hydroxyhex – 2 – ene
(C) Cyclohex – 1 – en – 3 – ol
(D) Cyclohex – 2 – en – 1 – ol

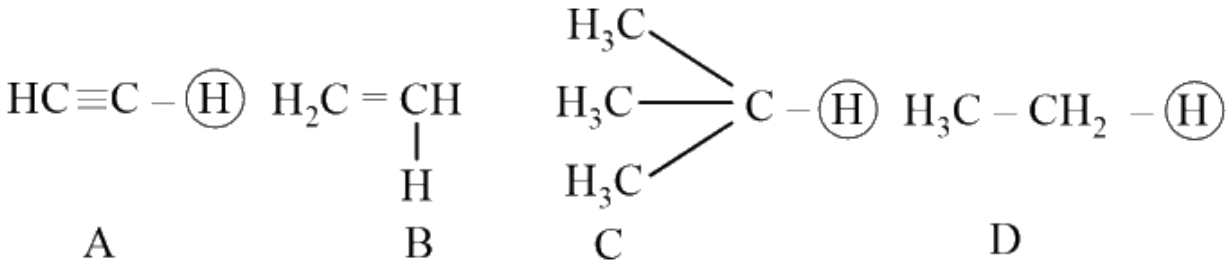
Answer: (D) Cyclohex – 2 – en – 1 – ol · Key from source paper

Q104 JEE Main 2024 · 29 Jan · Shift 2 MCQ

The ascending acidity order of the following H atoms is

(see the figure above)

Q35. The ascending acidity order of the following H atoms is



(1) C < D < B < A
(2) A < B < C < D
(3) A < B < D < C
(4) D < C < B < A

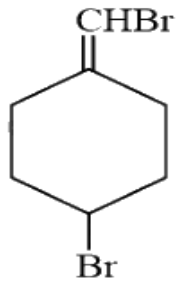
(A) C < D < B < A
(B) A < B < C < D
(C) A < B < D < C
(D) D < C < B < A

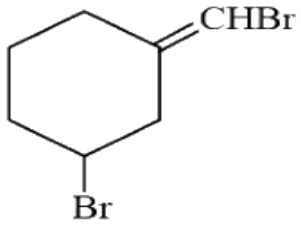
Answer: (A) C < D < B < A · Key from source paper

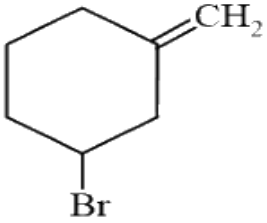
Q105 JEE Main 2024 · 29 Jan · Shift 2 MCQ

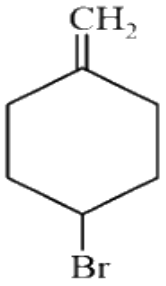
Which one of the following will show geometrical isomerism?

Q37. Which one of the following will show geometrical isomerism?

(1)


(2)


(3)


(4)


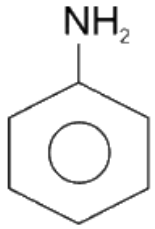
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

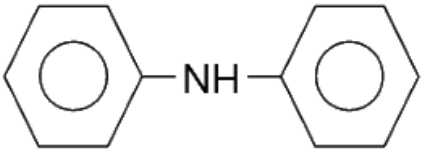
Answer: (B) · Key from source paper

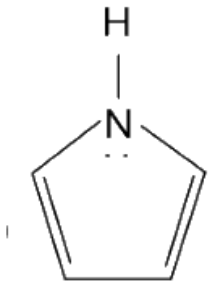
Q106 JEE Main 2024 · 27 Jan · Shift 1 MCQ

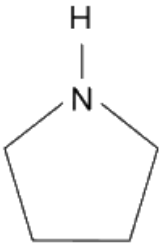
Which of the following is strongest Bronsted base?

Q34. Which of the following is strongest Bronsted base?

(1) 

(2) 

(3) 

(4) 

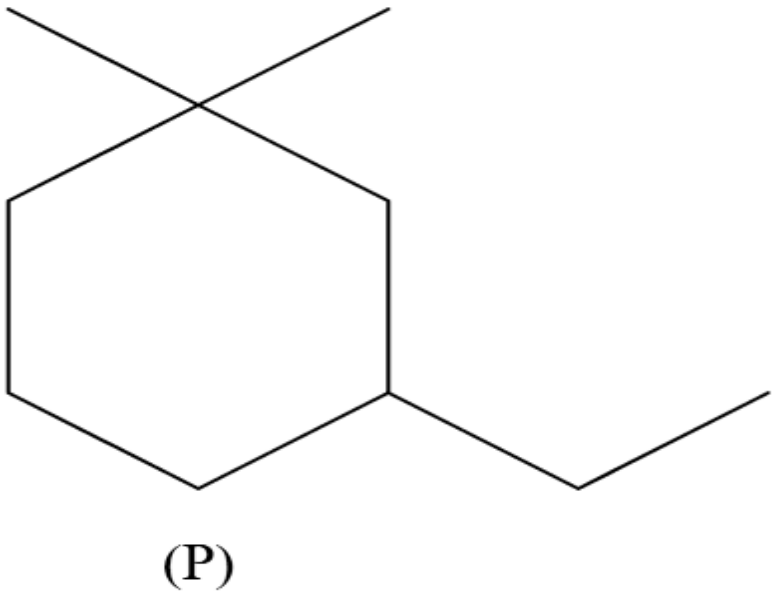
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

Q107 JEE Main 2024 · 27 Jan · Shift 1 MCQ

IUPAC name of following compound (P) is :

(see the figure above)



(P)

Figure redrawn by EdLoop

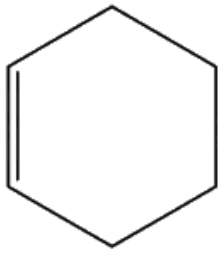
(A) 1 – Ethyl – 5, 5 – dimethylcyclohexane
(B) 3 – Ethyl – 1, 1 – dimethylcyclohexane
(C) 1 – Ethyl – 3, 3 – dimethylcyclohexane
(D) 1, 1 – Dimethyl – 3 – ethylcyclohexane

Answer: (B) 3 – Ethyl – 1, 1 – dimethylcyclohexane · Key from source paper

Q108 JEE Main 2024 · 27 Jan · Shift 1 MCQ

Cyclohexene *(see the figure above)* is _____ type of an organic compound.

Q38.



Cyclohexene is _____ type of an organic compound.

(1) Benzenoid aromatic
(2) Benzenoid non-aromatic
(3) Acyclic
(4) Alicyclic

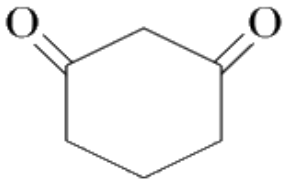
(A) Benzenoid aromatic
(B) Benzenoid non-aromatic
(C) Acyclic
(D) Alicyclic

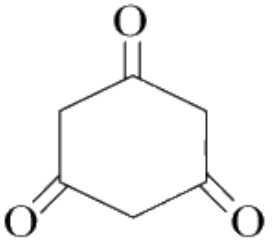
Answer: (D) Alicyclic · Key from source paper

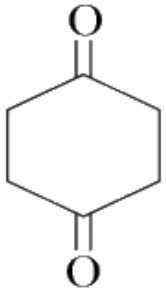
Q109 JEE Main 2024 · 27 Jan · Shift 1 MCQ

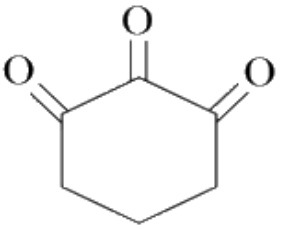
Highest enol content will be shown by :

Q41. Highest enol content will be shown by :

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

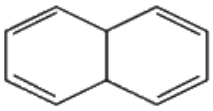
Answer: (B) · Key from source paper

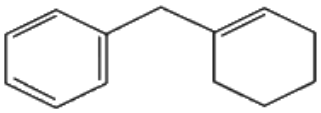
Q110 JEE Main 2024 · 27 Jan · Shift 1 Numerical

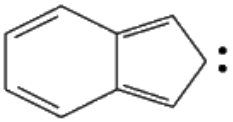
Among the given organic compounds, the total number of aromatic compounds is

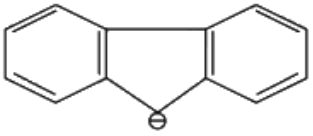
(see the figure above)

Q56. Among the given organic compounds, the total number of aromatic compounds is

(A) 

(B) 

(C) 

(D) 

Numerical value type: the answer is a number.

Answer: 3. · Key from source paper

Q111 JEE Main 2024 · 27 Jan · Shift 2 MCQ

The molecular formula of second homologue in the homologous series of mono carboxylic acids is _____.

(A) $C_3H_6O_2$

(B) $C_2H_4O_2$

(C) CH_2O

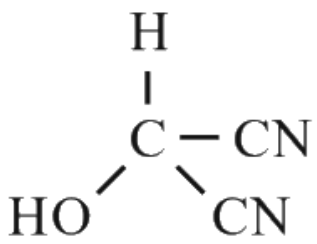
(D) $C_2H_2O_2$

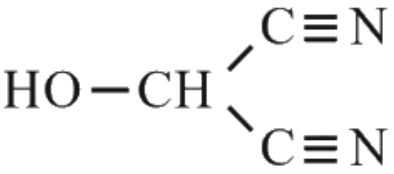
Answer: (B) $C_2H_4O_2$ · Key from source paper

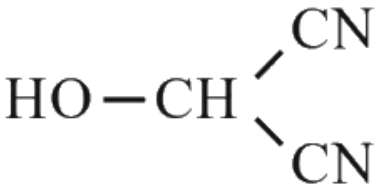
Q112 JEE Main 2024 · 27 Jan · Shift 2 MCQ

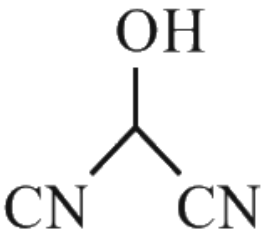
Bond line formula of $HOCH(CN)_2$ is:

Q33. Bond line formula of $HOCH(CN)_2$ is:

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

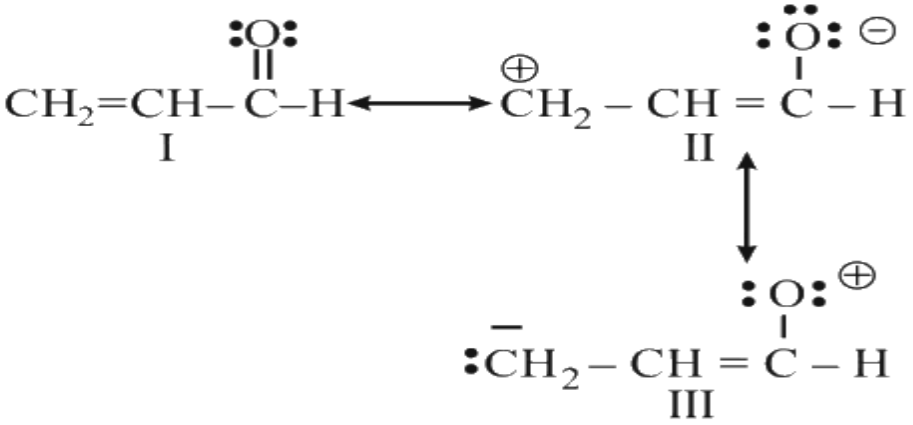
Q113 JEE Main 2024 · 27 Jan · Shift 2 MCQ

The order of relative stability of the contributing structure is:

(see the figure above)

Choose the correct answer from the options given below:

Q34. The order of relative stability of the contributing structure is:



Choose the correct answer from the options given below:

(1) I > II > III
(2) II > I > III
(3) I = II = III
(4) III > II > I

(A) I > II > III

(B) II > I > III

(C) I = II = III

(D) III > II > I

Answer: (A) I > II > III · Key from source paper

Q114 JEE Main 2024 · 27 Jan · Shift 2 Numerical

Total number of compounds with Chiral carbon atoms from following is

(see the figure above)

$CH_3 - CH_2 - CHNO_2 - COOH$

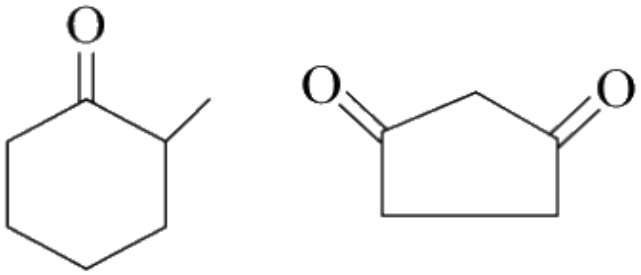
$CH_3 - CH(I) - CH_2 - NO_2$

$CH_3 - CH_2 - CHBr - CH_2 - CH_3$

$CH_3 - CH_2 - CH(OH) - CH_2OH$

(see the figure above)

Q57. Total number of compounds with Chiral carbon atoms from following is

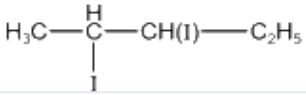


CH_3 - CH_2 - $CHNO_2$ - COOH

CH_3 - CH (I) - CH_2 - NO_2

CH_3 - CH_2 - CHBr - CH_2 - CH_3

CH_3 - CH_2 - CH (OH) - CH_2OH



Numerical value type: the answer is a number.

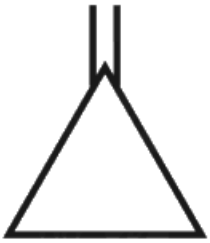
Answer: 5. · Key from source paper

Q115 JEE Main 2023 · 13 Apr · Shift 1 MCQ

Among the following compounds, the one which shows highest dipole moment is

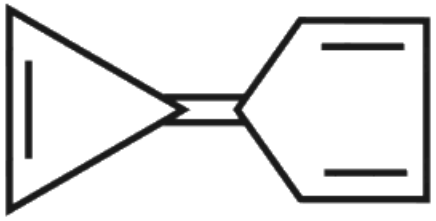
(see the figure above)

Q36. Among the following compounds, the one which shows highest dipole moment is

(1) 

(2) 

(3) 

(4) 

(A) (structure drawn, see figure)

(B) (structure drawn, see figure)

(C) (structure drawn, see figure)

(D) (structure drawn, see figure)

Answer: (D) (structure drawn, see figure) · Key from source paper

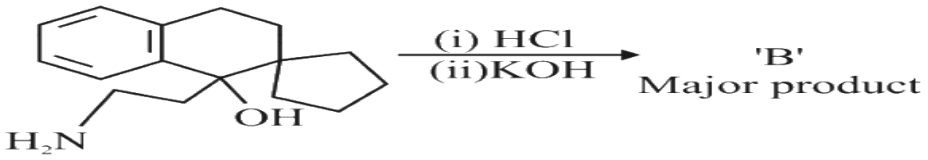
Q116 JEE Main 2023 · 13 Apr · Shift 1 MCQ

In the reaction given below

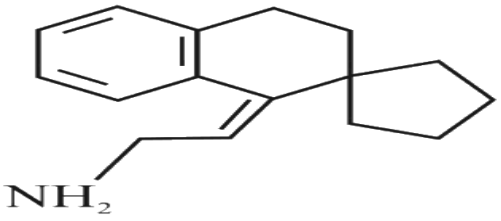
(see the figure above)

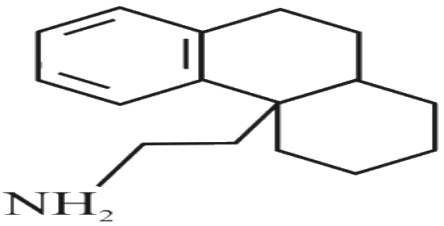
'B' is:

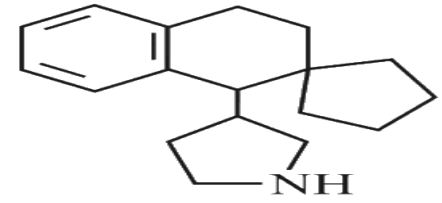
Q55. In the reaction given below

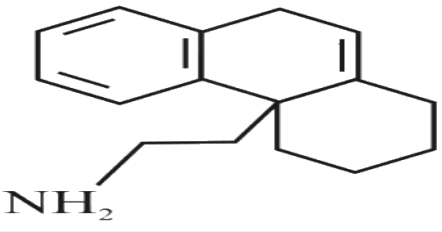


'B' is:

(1) 

(2) 

(3) 

(4) 

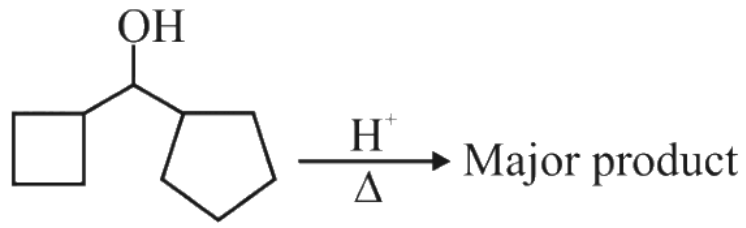
(A) (structure drawn, see figure)
(B) (structure drawn, see figure)
(C) (structure drawn, see figure)
(D) (structure drawn, see figure)

Answer: (D) (structure drawn, see figure) · Key from source paper

Q117 JEE Main 2023 · 13 Apr · Shift 1 MCQ

see figure

Q56.



In the above reaction, left hand side and right hand side rings are named as 'A' and 'B' respectively. They undergo ring expansion. The correct statement for this process is:

(1) Ring expansion can go upto seven membered rings
(2) Finally both rings will become six membered each.
(3) Finally both rings will become five membered each.
(4) Only A will become 6 membered.

(A) Ring expansion can go upto seven membered rings
(B) Finally both rings will become six membered each.
(C) Finally both rings will become five membered each.
(D) Only A will become 6 membered.

Answer: (B) Finally both rings will become six membered each. · Key from source paper

Q118 JEE Main 2023 · 13 Apr · Shift 1 MCQ

D - (+) - Glyceraldehyde $\xrightarrow[\text{iii) } HNO_3]{\text{i) } HCN \text{ ii) } H_2O/H^+}$

The products formed in the above reaction are

(A) One optically active and one meso product
(B) Two optically inactive products
(C) Two optically active products
(D) One optically inactive and one meso product

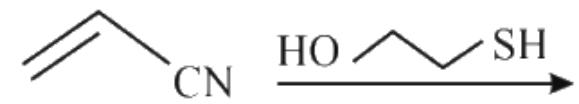
Answer: (A) One optically active and one meso product · Key from source paper

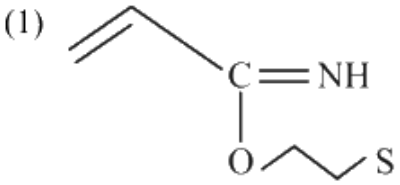
Q119 JEE Main 2023 · 13 Apr · Shift 2 MCQ

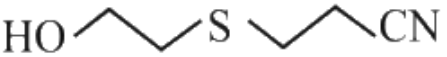
The major product for the following reaction is :

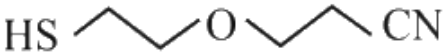
(see the figure above)

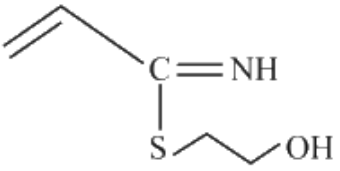
Q37. The major product for the following reaction is :



(1) 

(2) 

(3) 

(4) 

(A) (structure drawn, see figure)
(B) (structure drawn, see figure)
(C) (structure drawn, see figure)
(D) (structure drawn, see figure)

Answer: (B) (structure drawn, see figure) · Key from source paper

Q120 JEE Main 2023 · 13 Apr · Shift 2 MCQ

Given below are two statements :
Statement I : Tropolone is an aromatic compound and has 8π electrons.
Statement II : π electrons of $>C=O$ group in tropolone is involved in aromaticity. In the light of the above statements choose the correct answer from the options given below:

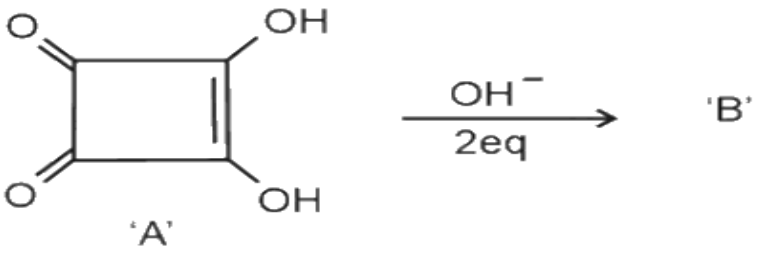
(A) Statement I is true but Statement II is false
(B) Statement I is false but Statement II is true
(C) Both Statement I and Statement II are false
(D) Both Statement I and Statement II are true

Answer: (A) Statement I is true but Statement II is false · Key from source paper

Q121 JEE Main 2023 · 12 Apr · Shift 1 MCQ

Correct statements for the given reaction are:
(see the figure above)
A. Compound 'B' is aromatic
B. The completion of above reaction is very slow
C. 'A' shows tautomerism
D. The bond lengths of C $-$ C in compound B are found to be same
Choose the correct answer from the options given below.

Q43. Correct statements for the given reaction are:



A. Compound 'B' is aromatic
B. The completion of above reaction is very slow
C. 'A' shows tautomerism
D. The bond lengths of C – C in compound B are found to be same
Choose the correct answer from the options given below.
(1) B, C and D only
(2) A, B and C only
(3) A, C and D only
(4) A, B and D only

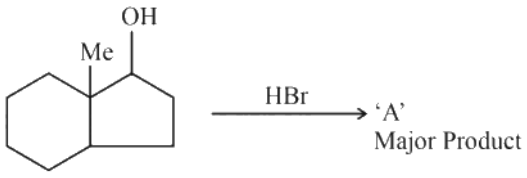
(A) B, C and D only
(B) A, B and C only
(C) A, C and D only
(D) A, B and D only

Answer: (C) A, C and D only · Key from source paper

Q122 JEE Main 2023 · 11 Apr · Shift 1 Numerical

see figure

Q54.



The number of hyperconjugation structures involved to stabilize carbocation formed in the above reaction is _____.

Numerical value type: the answer is a number.

Answer: 4. · Checked by our team

Q123 JEE Main 2023 · 11 Apr · Shift 2 Numerical

The number of possible isomeric products formed when 3-chloro-1-butene reacts with HCl through carbocation formation is _____

Numerical value type: the answer is a number.

Answer: 4. · Key from source paper

Q124 JEE Main 2023 · 10 Apr · Shift 2 MCQ

The decreasing order of hydride affinity for following carbocations is:

(a) *(see the figure above)*

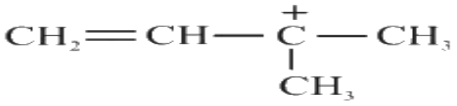
(2) *(see the figure above)*

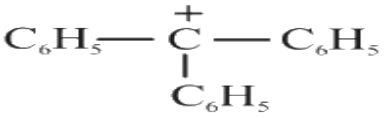
(3) *(see the figure above)*

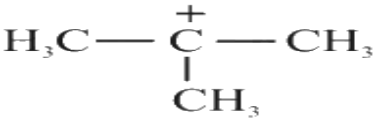
(4) *(see the figure above)*

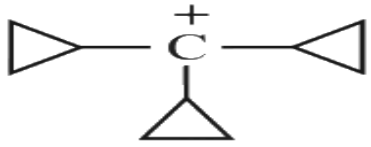
Choose the correct answer from the options given below:

Q38. The decreasing order of hydride affinity for following carbocations is:

(a) 

(2) 

(3) 

(4) 

Choose the correct answer from the options given below:

(1) C, A, D, B (2) C, A, B, D

(3) A, C, D, B (4) A, C, B, D

A C, A, D, B

B C, A, B, D

C A, C, D, B

D A, C, B, D

Answer: (B) C, A, B, D · Key from source paper

Q125 JEE Main 2023 · 10 Apr · Shift 2 MCQ

The correct order for acidity of the following hydroxyl compound is

(A) CH_3OH

(B) $CH_{33}COH$

(C) *(see the figure above)*

(D) *(see the figure above)*

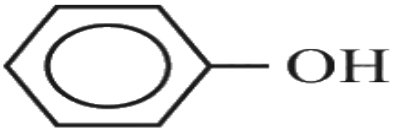
(E) *(see the figure above)*

Choose the correct answer from the options given below:

Q39. The correct order for acidity of the following hydroxyl compound is

(A) CH_3OH

(B) $CH_{33}COH$

(C) 

(D) 

(E) 

Choose the correct answer from the options given below:

(1) C > E > D > B > A

(2) E > D > C > B > A

(3) D > E > C > A > B

(4) E > C > D > A > B

(A) C > E > D > B > A

(B) E > D > C > B > A

(C) D > E > C > A > B

(D) E > C > D > A > B

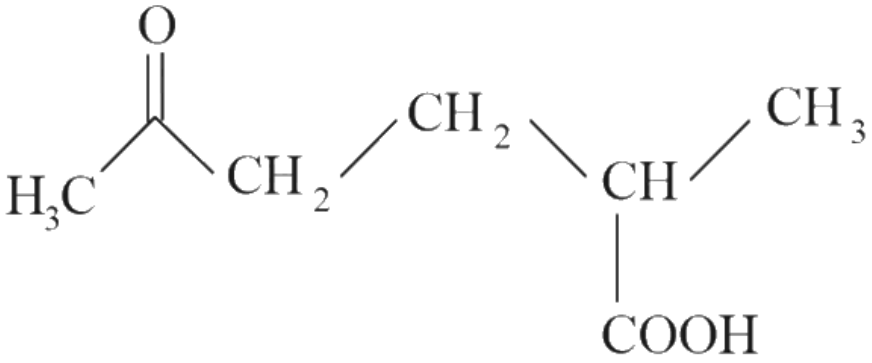
Answer: (D) E > C > D > A > B · Key from source paper

Q126 JEE Main 2023 · 8 Apr · Shift 2 MCQ

The correct IUPAC nomenclature for the following compound is:

(see the figure above)

Q45. The correct IUPAC nomenclature for the following compound is:



(1) 2-Methyl-5-oxohexanoic acid

(2) 2-Formyl-5-methylhexan-6-oic acid

(3) 5-Methyl-2-oxohexan-6-oic acid

(4) 5-Formyl-2-methylhexanoic acid

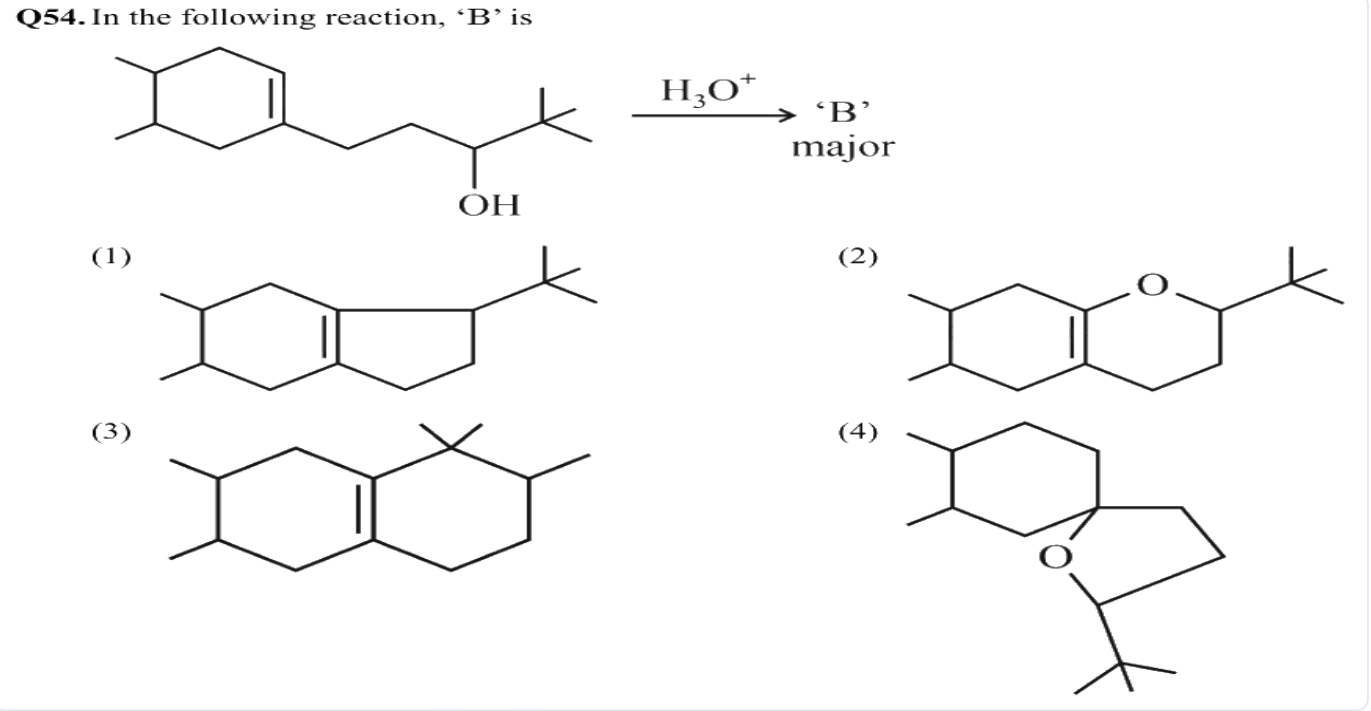
(A) 2-Methyl-5-oxohexanoic acid
(B) 2-Formyl-5-methylhexan-6-oic acid
(C) 5-Methyl-2-oxohexan-6-oic acid
(D) 5-Formyl-2-methylhexanoic acid

Answer: (A) 2-Methyl-5-oxohexanoic acid · Key from source paper

Q127 JEE Main 2023 · 6 Apr · Shift 2 MCQ

In the following reaction, 'B' is

(see the figure above)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

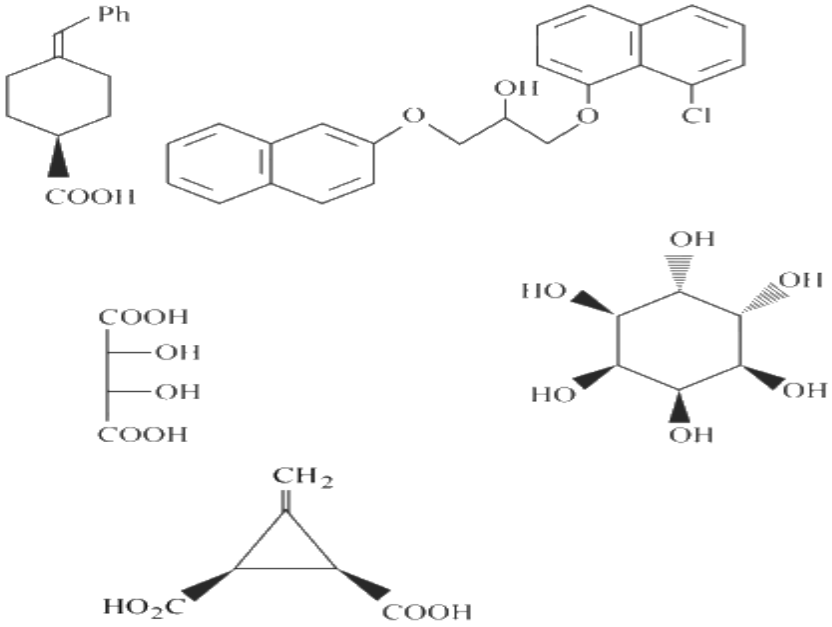
Answer: (C) · Key from source paper

Q128 JEE Main 2023 · 1 Feb · Shift 1 Numerical

The total number of chiral compound/s from the following is

(see the figure above)

Q55. The total number of chiral compound/s from the following is



Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

Q129 JEE Main 2023 · 1 Feb · Shift 1 Numerical

Number of isomeric compounds with molecular formula $C_9H_{10}O$ which

(i) do not dissolve in NaOH

(ii) do not dissolve in HCl.

(iii) do not give orange precipitate with 2, 4 - DNP

(iv) on hydrogenation give identical compound with molecular formula $C_9H_{12}O$ is

Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

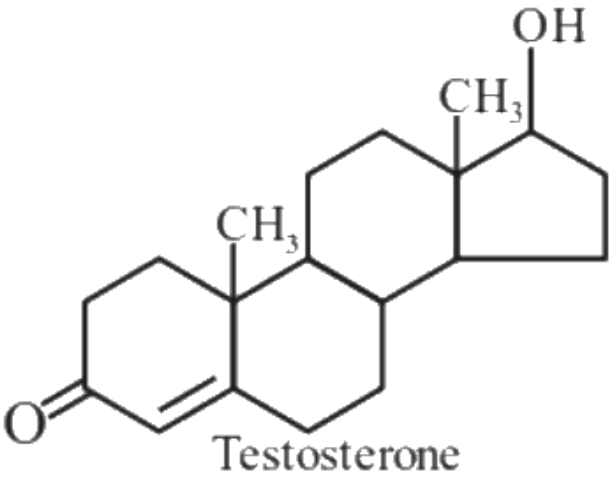
Q130 JEE Main 2023 · 1 Feb · Shift 2 Numerical

Testosterone, which is a steroidal hormone, has the following structure.

(see the figure above)

The total number of asymmetric carbon atom/s in testosterone is _____.

Q42. Testosterone, which is a steroidal hormone, has the following structure.



Testosterone

The total number of asymmetric carbon atom/s in testosterone is _____.

Numerical value type: the answer is a number.

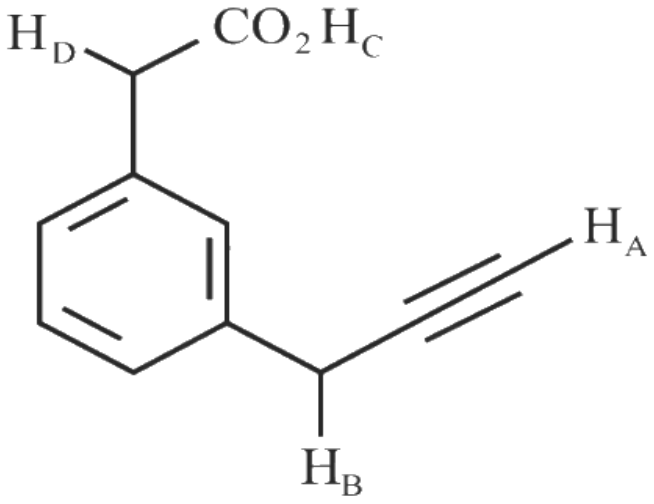
Answer: 6. · Key from source paper

Q131 JEE Main 2023 · 30 Jan · Shift 1 MCQ

What is the correct order of acidity of the protons marked $A - D$ in the given compounds?

(see the figure above)

Q37. What is the correct order of acidity of the protons marked $A - D$ in the given compounds?



(1) $H_C > H_D > H_B > H_A$

(2) $H_C > H_D > H_A > H_B$

(3) $H_D > H_C > H_B > H_A$

(4) $H_C > H_A > H_D > H_B$

(A) $H_C > H_D > H_B > H_A$
(B) $H_C > H_D > H_A > H_B$
(C) $H_D > H_C > H_B > H_A$
(D) $H_C > H_A > H_D > H_B$

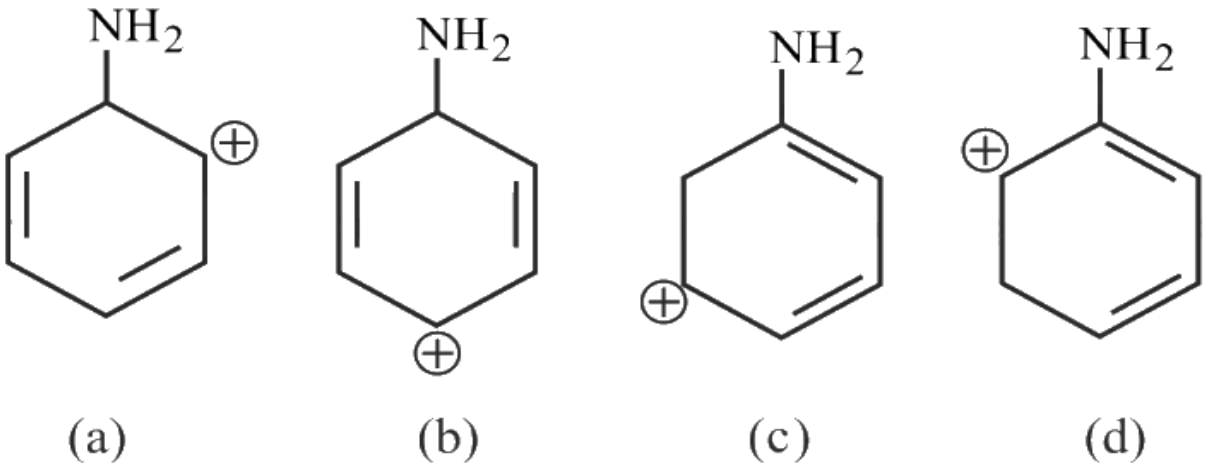
Answer: (B) $H_C > H_D > H_A > H_B$ · Key from source paper

Q132 JEE Main 2023 · 30 Jan · Shift 2 MCQ

The most stable carbocation for the following is:

(see the figure above)

Q40. The most stable carbocation for the following is:



(1) c
(2) d
(3) b
(4) a

(A) c
(B) d
(C) b
(D) a

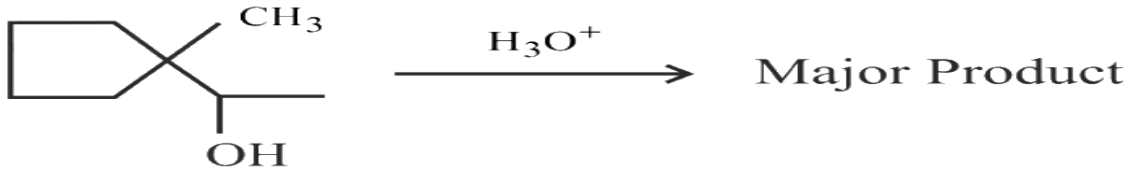
Answer: (A) c · Key from source paper

Q133 JEE Main 2023 · 29 Jan · Shift 2 MCQ

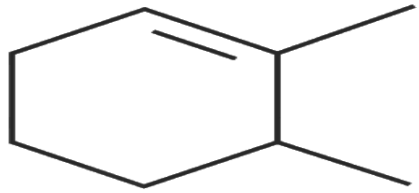
Find out the major product for the following reaction

(see the figure above)

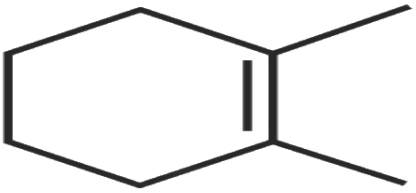
Q55. Find out the major product for the following reaction



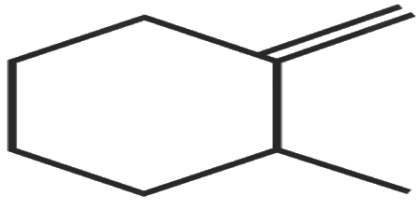
(1)



(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

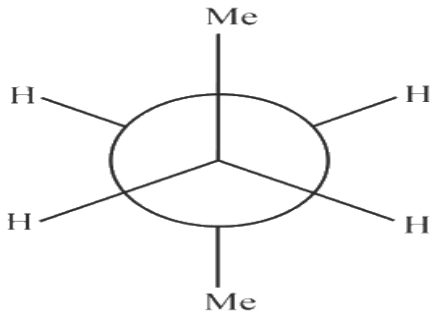
Answer: (B) · Key from source paper

Q134 JEE Main 2023 · 25 Jan · Shift 1 MCQ

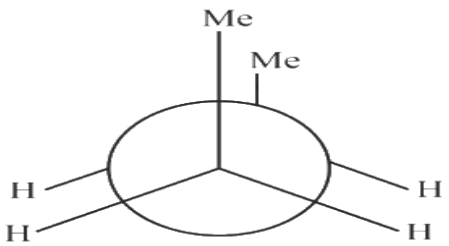
Which of the following conformations will be the most stable?

Q37. Which of the following conformations will be the most stable?

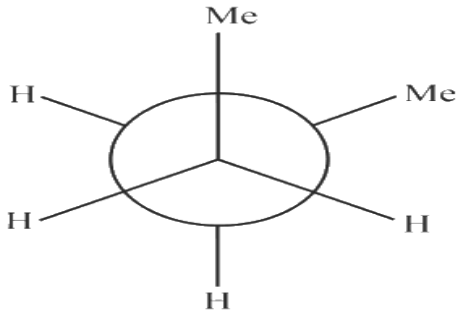
(1)



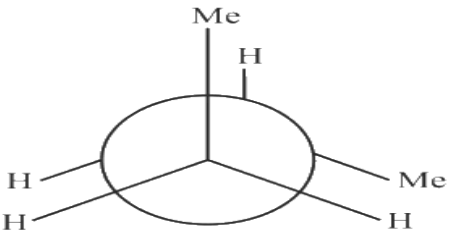
(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (A) · Key from source paper

Q135 JEE Main 2023 · 25 Jan · Shift 2 MCQ

Match List I with List II.

Choose the correct answer from the options given below :-

List I Isomeric pairs	List II Type of isomers
A. Propanamine and N-Methylethanamine	I. Metamers
B. Hexan-2-one and Hexan-3-one	II. Positional isomers
C. Ethanamide and Hydroxyethanimine	III. Functional isomers
D. o-nitrophenol and pnitrophenol	IV. Tautomers

(A) A – III, B – IV, C – I, D – II
(B) A – IV, B – III, C – I, D – II
(C) A – II, B – III, C – I, D – IV
(D) A – III, B – I, C – IV, D – II

Answer: (D) A – III, B – I, C – IV, D – II · Key from source paper

Q136 JEE Main 2023 · 25 Jan · Shift 2 MCQ

The isomeric deuterated bromide with molecular formula C_4H_8DBr having two chiral carbon atoms is

(A) 2-Bromo-1-deuterobutane
(B) 2-Bromo-2-deuterobutane
(C) 2-Bromo-3-deuterobutane
(D) 2-Bromo-1-deutero-2-methylpropane

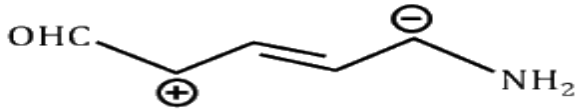
Answer: (C) 2-Bromo-3-deuterobutane · Key from source paper

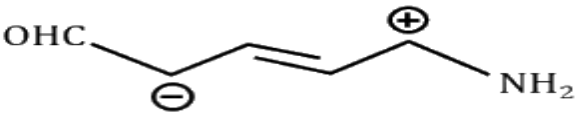
Q137 JEE Main 2023 · 24 Jan · Shift 1 MCQ

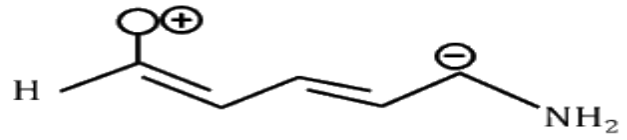
Increasing order of stability of the resonance structure is:

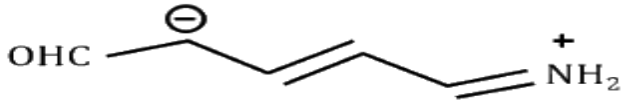
(see the figure above)

Q36. Increasing order of stability of the resonance structure is:

A. 

B. 

C. 

D. 

(1) C, D, B, A
(2) C, A, B, D
(3) D, C, A, B
(4) D, C, B, A

(A) C, D, B, A
(B) C, A, B, D
(C) D, C, A, B
(D) D, C, B, A

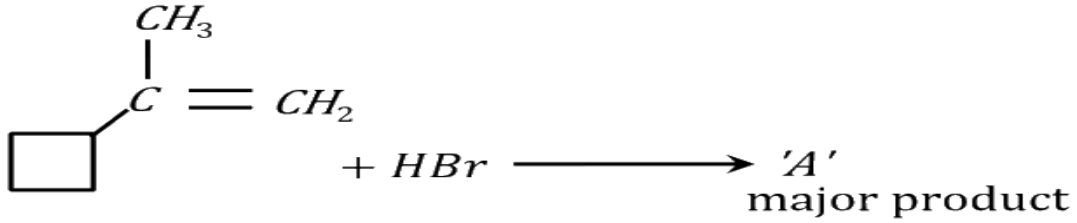
Answer: (B) C, A, B, D · Key from source paper

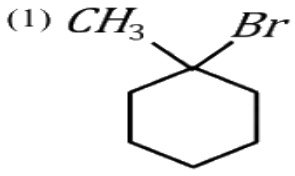
Q138 JEE Main 2023 · 24 Jan · Shift 1 MCQ

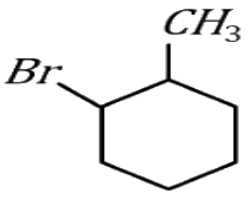
In the following given reaction 'A' is

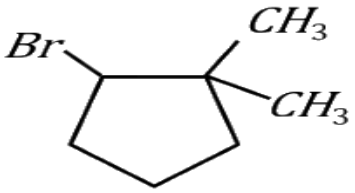
(see the figure above)

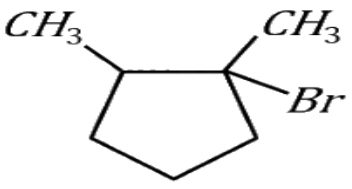
Q46. In the following given reaction 'A' is



(1) 

(2) 

(3) 

(4) 

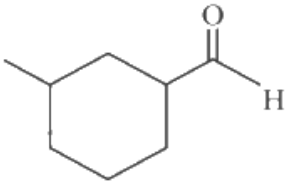
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

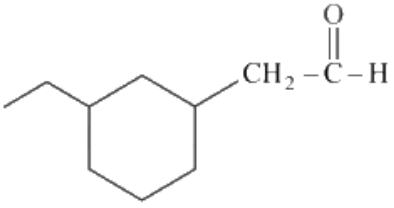
Answer: (D) · Checked by our team

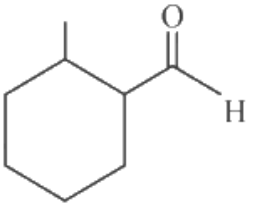
Q139 JEE Main 2022 · 29 Jul · Shift 2 MCQ

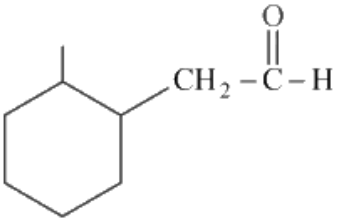
Correct structure of γ-methylcyclohexane carbaldehyde is

Q39. Correct structure of γ-methylcyclohexane carbaldehyde is

(1) 

(2) 

(3) 

(4) 

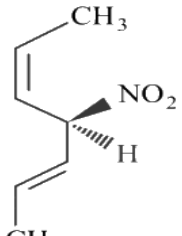
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

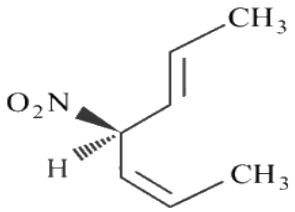
Answer: (A) · Key from source paper

Q140 JEE Main 2022 · 29 Jul · Shift 2 MCQ

Given below are two statements.
Statement I : The compound *(see the figure above)* is optically active.
Statement II : *(see the figure above)* is mirror image of above compound A.
In the light of the above statement, choose the most appropriate answer from the options given below.

Q40. Given below are two statements.

Statement I : The compound  is optically active.

Statement II :  is mirror image of above compound A.

In the light of the above statement, choose the most appropriate answer from the options given below.

(1) Both Statement I and Statement II are correct
(2) Both Statement I and Statement II are incorrect.
(3) Statement I is correct but Statement II is incorrect.
(4) Statement I is incorrect but Statement II is correct.

(A) Both Statement I and Statement II are correct
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct but Statement II is incorrect.
(D) Statement I is incorrect but Statement II is correct.

Answer: (C) Statement I is correct but Statement II is incorrect. · Key from source paper

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Q141 JEE Main 2022 · 29 Jul · Shift 2 Numerical

The number of stereoisomers formed in a reaction of $\pm$ PhC = OCOHCNPh with HCN is

Numerical value type: the answer is a number.

Answer: 3. · Key from source paper

Q142 JEE Main 2022 · 28 Jul · Shift 1 MCQ

Match List-I with List-II.

List-I

A. *(see the figure above)*

B. *(see the figure above)*

C. *(see the figure above)*

D. *(see the figure above)*

List-II

I. Spiro compound

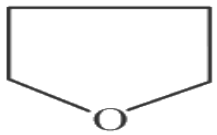
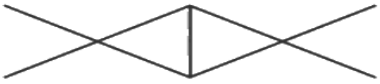
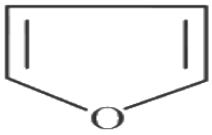
II. Aromatic compound

III. Non-planar Heterocyclic compound

IV. Bicyclo compound

Choose the correct answer from the options given below

Q37. Match List-I with List-II.

List-I		List-II	
A		I	Spiro compound
B		II	Aromatic compound
C		III	Non-planar Heterocyclic compound
D		IV	Bicyclo compound

Choose the correct answer from the options given below

(1) A - II, B - I, C - IV, D - III
(2) A - IV, B - III, C - I, D - II
(3) A - III, B - IV, C - I, D - II
(4) A - IV, B - III, C - II, D - I

(A) A - II, B - I, C - IV, D - III
(B) A - IV, B - III, C - I, D - II
(C) A - III, B - IV, C - I, D - II
(D) A - IV, B - III, C - II, D - I

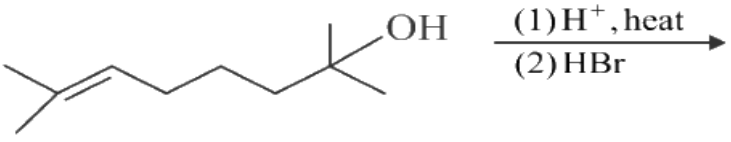
Answer: (C) A - III, B - IV, C - I, D - II · Key from source paper

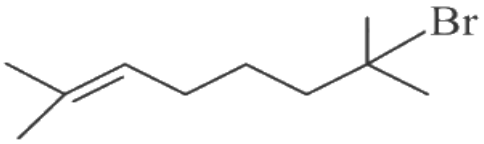
Q143 JEE Main 2022 · 28 Jul · Shift 2 MCQ

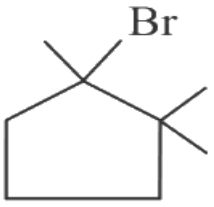
The major product in the given reaction is

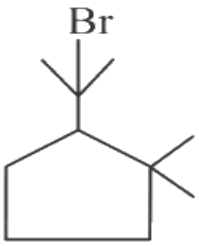
(see the figure above)

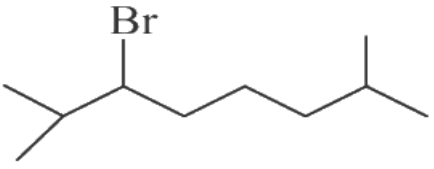
Q44. The major product in the given reaction is



(1) 

(2) 

(3) 

(4) 

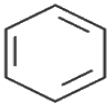
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

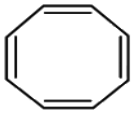
Answer: (C) · Key from source paper

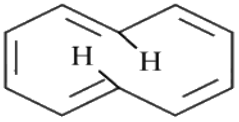
Q144 JEE Main 2022 · 27 Jul · Shift 1 MCQ

Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R.
Assertion A : [6] Annulene. [8] Annulene and cis −[10] Annulene, are respectively aromatic, not-aromatic and aromatic.
(see the figure above)
Reason R: Planarity is one of the requirements of aromatic systems.
In the light of the above statements, choose the most appropriate answer from the options given below.

Q38. Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R.
Assertion A : [6] Annulene. [8] Annulene and cis −[10] Annulene, are respectively aromatic, not-aromatic and aromatic.

[6] Annulene 

[8] Annulene 

Cis-[10] Annulene 

Reason R: Planarity is one of the requirements of aromatic systems.
In the light of the above statements, choose the most appropriate answer from the options given below.
(1) Both A and R are correct and R is the correct explanation of A.
(2) Both A and R are correct but R is NOT the correct explanation of A.
(3) A is correct but R is not correct.
(4) A is not correct but R is correct.

(A) Both A and R are correct and R is the correct explanation of A.
(B) Both A and R are correct but R is NOT the correct explanation of A.
(C) A is correct but R is not correct.
(D) A is not correct but R is correct.

Answer: (D) A is not correct but R is correct. · Key from source paper

Q145 JEE Main 2022 · 27 Jul · Shift 1 Numerical

Optical activity of an enantiomeric mixture is +12.6° and the specific rotation of (+) isomer is +30°. The optical purity is _____ %

Numerical value type: the answer is a number.

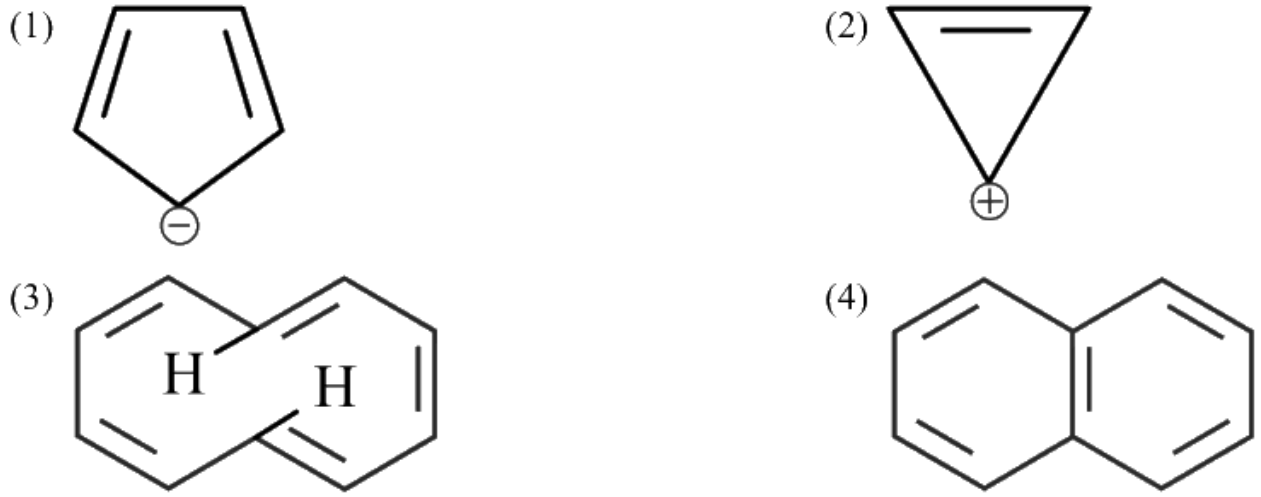
Answer: 42. · Key from source paper

Q146 JEE Main 2022 · 26 Jul · Shift 1 MCQ

Which of the following compounds is not aromatic?

(see the figure above)

Q38. Which of the following compounds is not aromatic?



(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (C) · Key from source paper

Q147 JEE Main 2022 · 26 Jul · Shift 2 MCQ

The correct decreasing order of priority of functional groups in naming an organic compound as per IUPAC system of nomenclature is

Q38. The correct decreasing order of priority of functional groups in naming an organic compound as per IUPAC system of nomenclature is

(1) -COOH > - $CONH_2$ > - COCl > - CHO

(2) $-SO_3H$ > - COCl > - $CONH_2$ > - CN

(3) $-COOR > -COCl > NH_2 > \diagdown\!\!\diagup C=O$

(4) COOH > - - COOR > - $CONH_2$ > - COCl

(A) $-COOH > -CONH_2 > -COCl > -CHO$

(B) $-SO_3H > -COCl > -CONH_2 > -CN$

(C) $-COOR > -COCl > NH_2 >$ *(see the figure above)* a carbonyl group drawn as a carbon with a double bond to O and two open bonds (>C=O)

(D) $COOH > - - COOR > -CONH_2 > -COCl$

Answer: (B) $-SO_3H > -COCl > -CONH_2 > -CN$ · Key from source paper

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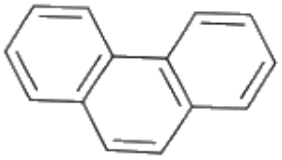
Q148 JEE Main 2022 · 26 Jul · Shift 2 MCQ

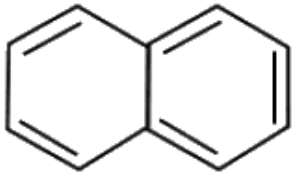
Which of the following is not an example of benzenoid compound?

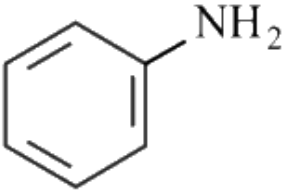
(see the figure above)

Q39. Which of the following is not an example of benzenoid compound?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (B) · Key from source paper

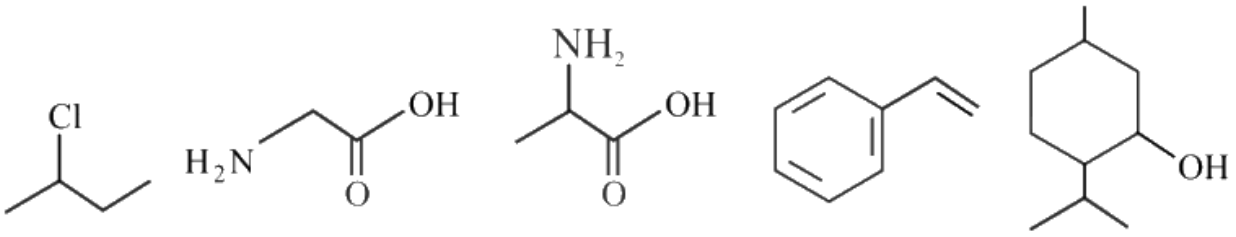
Q149 JEE Main 2022 · 29 Jun · Shift 1 Numerical

Observe structures of the following compounds

(see the figure above)

The total number of structures/compounds which possess asymmetric carbon atoms is

Q54. Observe structures of the following compounds



The total number of structures/compounds which possess asymmetric carbon atoms is

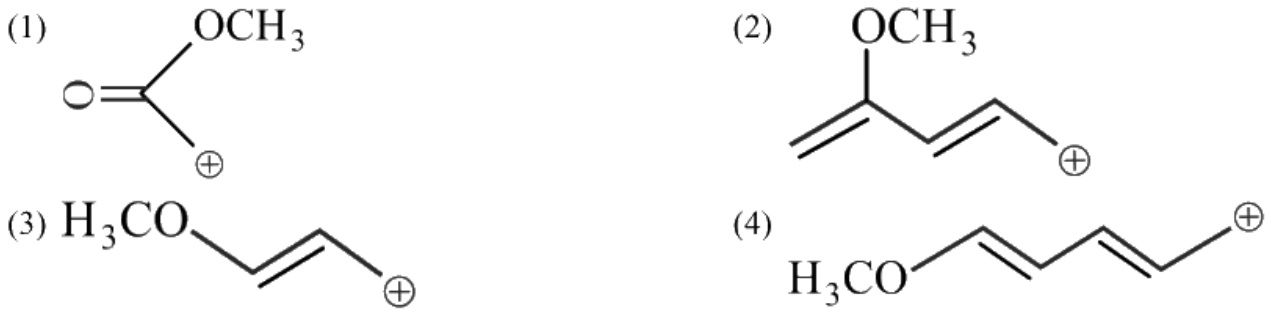
Numerical value type: the answer is a number.

Answer: 3. · Key from source paper

Q150 JEE Main 2022 · 29 Jun · Shift 2 MCQ

Which of the following carbocations is most stable:

Q39. Which of the following carbocations is most stable:



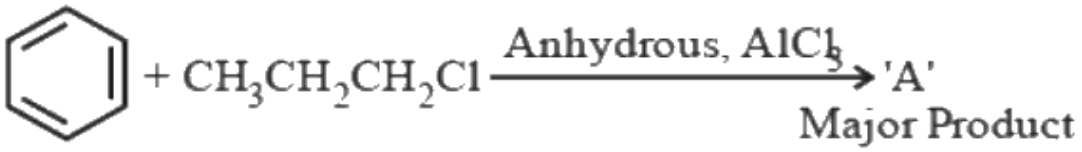
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

Q151 JEE Main 2022 · 29 Jun · Shift 2 MCQ

see figure

Q44.

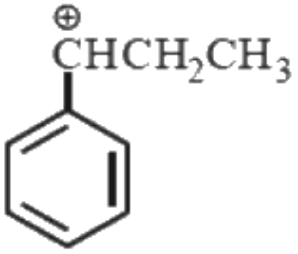


The stable carbocation formed in the above reaction is :

(1) $CH_3CH_2\overset{+}{C}H_2$

(2) $CH_3\overset{\oplus}{C}H_2$

(3) $CH_3-\overset{\oplus}{C}H-CH_3$

(4) 

(A) *see figure*

(B) $CH_3\overset{\oplus}{C}H_2$

(C) $CH_3-\overset{\oplus}{C}H-CH_3$

(D) *see figure*

Answer: (C) $CH_3-\overset{\oplus}{C}H-CH_3$ · Key from source paper

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Q152 JEE Main 2022 · 29 Jun · Shift 2 Numerical

The number of chiral alcohol(s) with molecular formula $C_4H_{10}O$ is _____ (Assume stereoisomers as different chiral alcohols)

Numerical value type: the answer is a number.

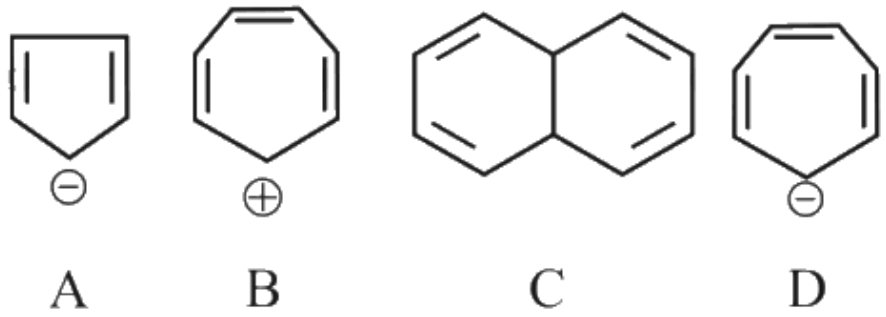
Answer: 2. · Key from source paper

Q153 JEE Main 2022 · 28 Jun · Shift 1 MCQ

Which of the following structures are aromatic in nature?

(see the figure above)

Q33. Which of the following structures are aromatic in nature?



A B C D

(1) A, B, C & D
(2) Only A & B
(3) Only A & C
(4) Only B, C & D

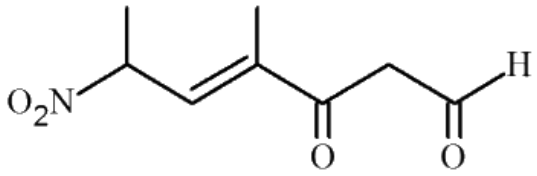
(A) A, B, C & D
(B) Only A & B
(C) Only A & C
(D) Only B, C & D

Answer: (B) Only A & B · Key from source paper

Q154 JEE Main 2022 · 28 Jun · Shift 2 MCQ

The correct IUPAC name of the following compound is
(see the figure above)

Q38. The correct IUPAC name of the following compound is



(1) 4-methyl-2-nitro-5-oxohept-3-enal
(2) 4-methyl-5-oxo-2-nitrohept-3-enal
(3) 4-methyl-6-nitro-3-oxohept-4-enal
(4) 6-formyl-4-methyl-2-nitrohex-3-enal

(A) 4-methyl-2-nitro-5-oxohept-3-enal
(B) 4-methyl-5-oxo-2-nitrohept-3-enal
(C) 4-methyl-6-nitro-3-oxohept-4-enal
(D) 6-formyl-4-methyl-2-nitrohex-3-enal

Answer: (C) 4-methyl-6-nitro-3-oxohept-4-enal · Key from source paper

Q155 JEE Main 2022 · 27 Jun · Shift 1 Numerical

Total number of possible stereoisomers of dimethyl cyclopentane is

Numerical value type: the answer is a number.

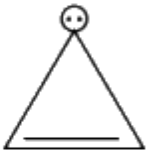
Answer: 6. · Key from source paper

Q156 JEE Main 2022 · 27 Jun · Shift 2 MCQ

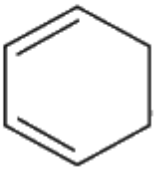
Which of the following is most stable?

Q35. Which of the following is most stable?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

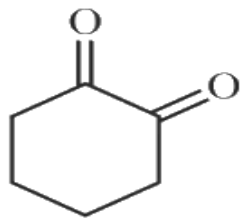
Answer: (A) · Key from source paper

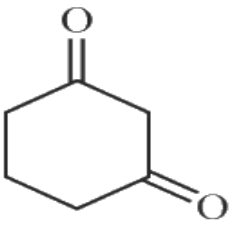
Q157 JEE Main 2022 · 26 Jun · Shift 1 MCQ

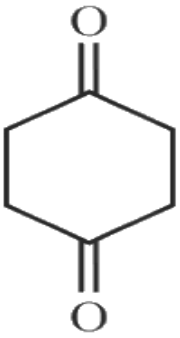
Which will have the highest enol content?
(see the figure above)

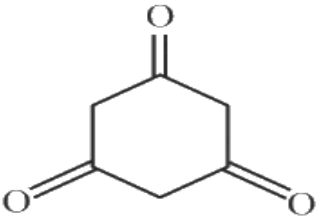
EdLoop

Q37. Which will have the highest enol content?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

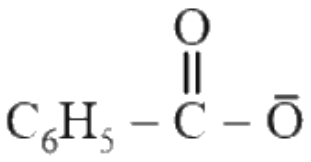
Q158 JEE Main 2022 · 26 Jun · Shift 1 MCQ

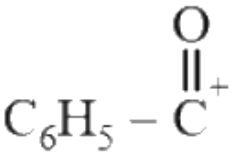
$(C_7H_5O_2)_2 \xrightarrow{h\nu} [X] \rightarrow 2\dot{C}_6H_5 + 2\,CO_2$

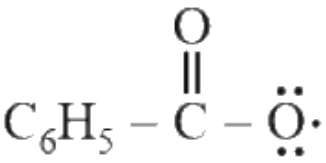
Consider the above reaction and identify the intermediated 'X'

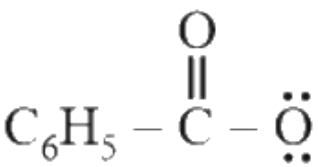
Q45. $(C_7H_5O_2)_2 \xrightarrow{hv} [X] \rightarrow 2\dot{C}_6H_5 + 2\,CO_2$

Consider the above reaction and identify the intermediated 'X'

(1) 

(2) 

(3) 

(4) 

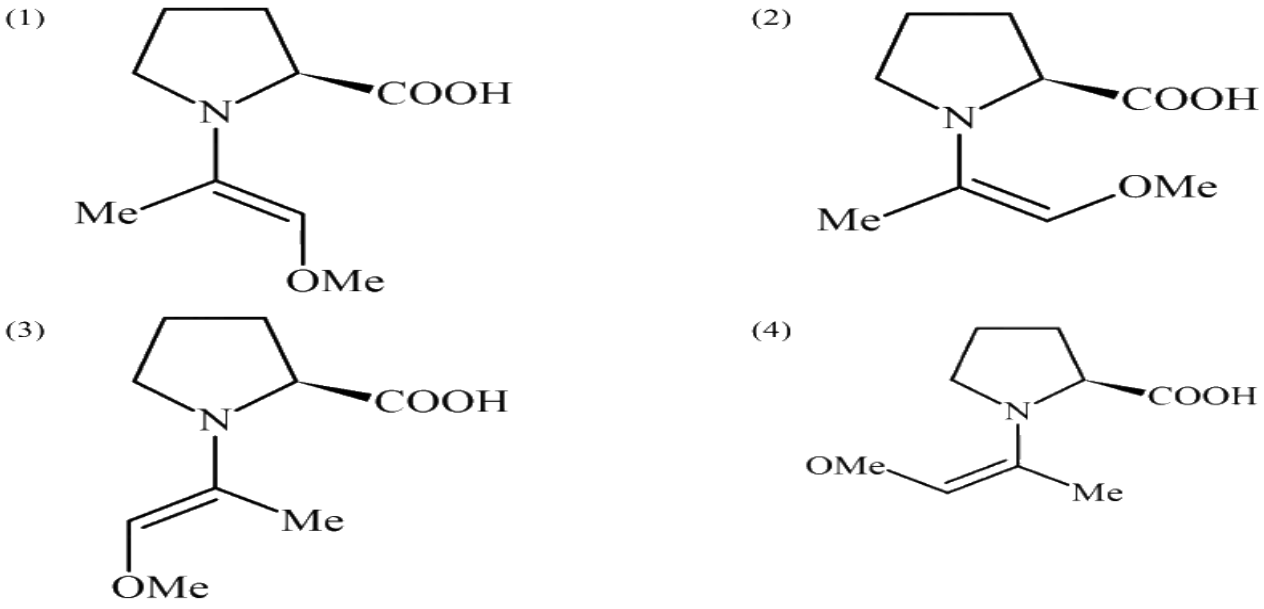
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q159 JEE Main 2022 · 26 Jun · Shift 1 MCQ

Among the following structures, which will show the most stable enamine formation?
(Where Me is $-CH_3$)
(see the figure above)

Q47. Among the following structures, which will show the most stable enamine formation?
(Where Me is $-CH_3$)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q160 JEE Main 2022 · 26 Jun · Shift 2 MCQ

The correct order of nucleophilicity is

(A) $F^- > OH^-$

(B) $H_2\ddot{O} > OH^-$

(C) $ROH > RO^-$

(D) $NH_2^- > NH_3$

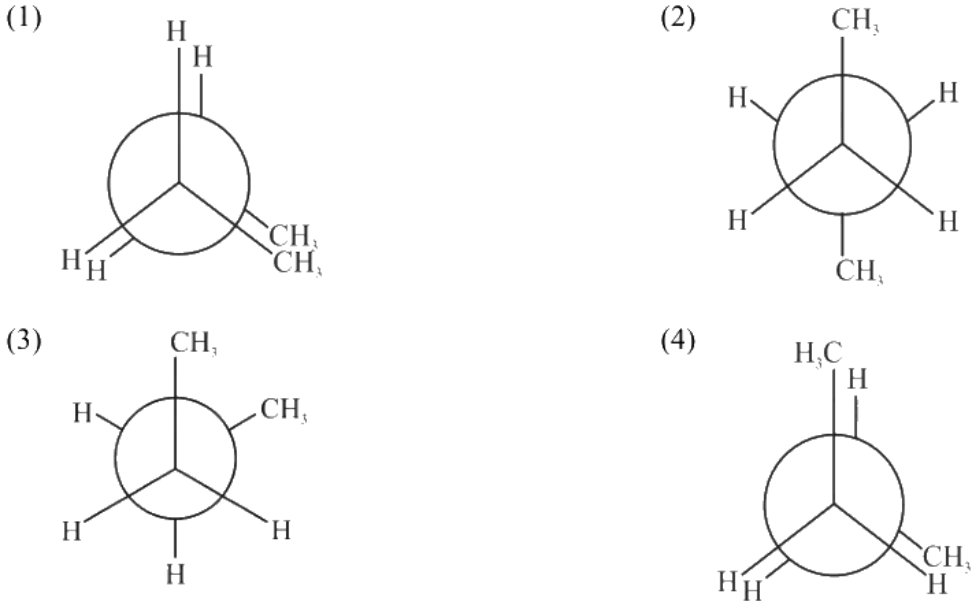
Answer: (D) $NH_2^- > NH_3$ · Key from source paper

Q161 JEE Main 2022 · 25 Jun · Shift 1 MCQ

In the following structures, which one is having staggered conformation with maximum dihedral angle?

(see the figure above)

Q36. In the following structures, which one is having staggered conformation with maximum dihedral angle?



(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (B) · Key from source paper

Q162 JEE Main 2022 · 25 Jun · Shift 1 MCQ

The IUPAC name of ethylidene chloride is

(A) 1 - chloroethene

(B) 1, 2-dichloroethane

(C) 1, 1-dichloroethane

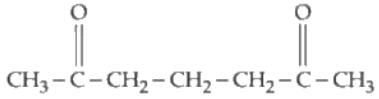
(D) 1-chloroethyne

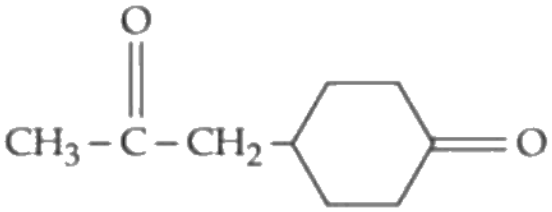
Answer: (C) 1, 1-dichloroethane · Key from source paper

Q163 JEE Main 2022 · 24 Jun · Shift 1 MCQ

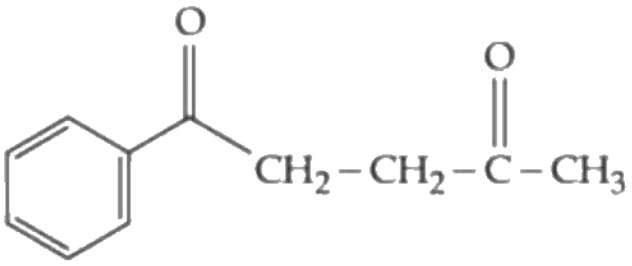
Which of the following is an example of conjugated diketone?

Q37. Which of the following is an example of conjugated diketone?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

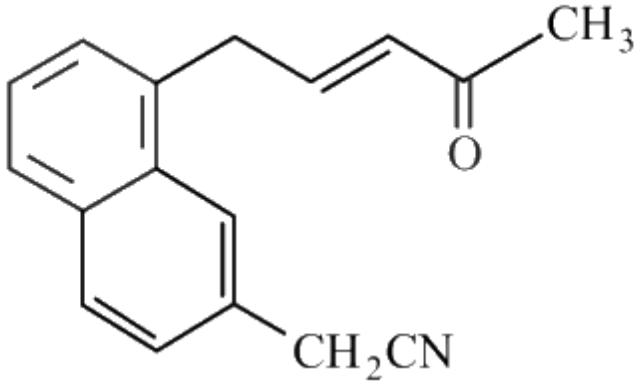
Answer: (C) · Key from source paper

Q164 JEE Main 2022 · 24 Jun · Shift 1 Numerical

Number of electrophillic centres in the given compound is _____

(see the figure above)

Q53. Number of electrophillic centres in the given compound is___



Numerical value type: the answer is a number.

Answer: 3. · Key from source paper

Q165 JEE Main 2022 · 24 Jun · Shift 1 · Numerical

The major product 'A' of the following given reaction has sp^2 hybridized carbon atoms.

2, 7-Dimethyl-2, 6-octadiene $\xrightarrow{H^+}$ A (Major Product)

Numerical value type: the answer is a number.

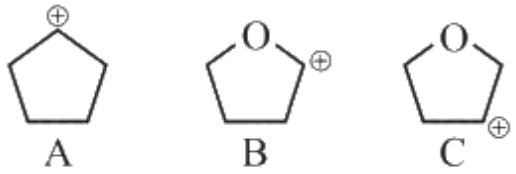
Answer: 2. · Key from source paper

Q166 JEE Main 2022 · 24 Jun · Shift 2 · MCQ

Arrange the following carbocations in decreasing order of stability.

(see the figure above)

Q37. Arrange the following carbocations in decreasing order of stability.



(1) $A > C > B$
(2) $B > A > C$
(3) $C > B > A$
(4) $C > A > B$

(A) $A > C > B$
(B) $B > A > C$
(C) $C > B > A$
(D) $C > A > B$

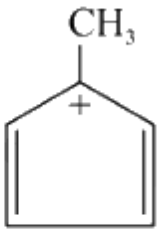
Answer: (B) $B > A > C$ · Key from source paper

Q167 JEE Main 2021 · 1 Sep · Shift 2 · MCQ

Which one of the following compounds is aromatic in nature?

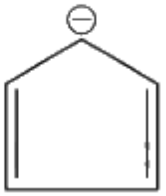
(see the figure above)

Q34. Which one of the following compounds is aromatic in nature?

(1) 

(2) 

(3) Both A and B

(4) 

(A) *see figure*
(B) *see figure*
(C) Both A and B
(D) *see figure*

Answer: (D) · Key from source paper

Q168 JEE Main 2021 · 1 Sep · Shift 2 MCQ

The stereoisomers that are formed by electrophilic addition of bromine to trans - but - 2 - ene is/are :

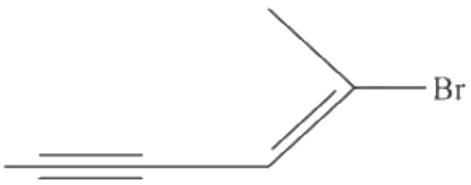
(A) 2 identical mesomers
(B) 2 enantiomers
(C) 2 enantiomers and 2 mesomers
(D) 1 racemic and 2 enantiomers

Answer: (A) 2 identical mesomers · Key from source paper

Q169 JEE Main 2021 · 31 Aug · Shift 1 MCQ

Choose the correct name for compound given below :
(see the figure above)

Q36. Choose the correct name for compound given below :



(1) (2E)-2-Bromo-hex-4-yn-2-ene
(2) (4E)-5-Bromo-hex-2-en-4-yne
(3) (4E)-5-Bromo-hex-4-en-2-yne
(4) (2E)-2-Bromohex-2-en-4-yne

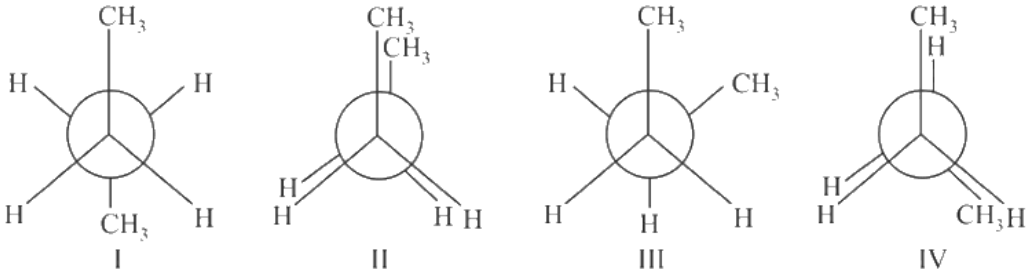
(A) (2E)-2-Bromo-hex-4-yn-2-ene
(B) (4E)-5-Bromo-hex-2-en-4-yne
(C) (4E)-5-Bromo-hex-4-en-2-yne
(D) (2E)-2-Bromohex-2-en-4-yne

Answer: (D) (2E)-2-Bromohex-2-en-4-yne · Key from source paper

Q170 JEE Main 2021 · 31 Aug · Shift 2 MCQ

Arrange the following conformational isomers of n-butane in order of their increasing potential energy:
(see the figure above)

Q36. Arrange the following conformational isomers of n-butane in order of their increasing potential energy:



(1) I < III < IV < II
(2) I < IV < III < II
(3) II < IV < III < I
(4) II < III < IV < I

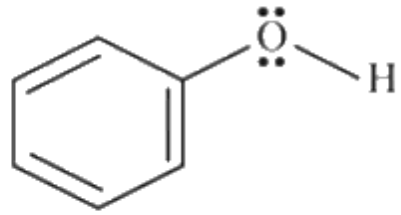
(A) I < III < IV < II
(B) I < IV < III < II
(C) II < IV < III < I
(D) II < III < IV < I

Answer: (A) I < III < IV < II · Key from source paper

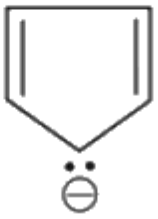
Q171 JEE Main 2021 · 26 Aug · Shift 2 MCQ

Which one of the following compounds is not aromatic?

Q37. Which one of the following compounds is not aromatic?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q172 JEE Main 2021 · 26 Aug · Shift 2 MCQ

The number of stereoisomers possible for 1, 2 -dimethyl cyclopropane is:

(A) Two
(B) One
(C) Four
(D) Three

Answer: (D) Three · Key from source paper

Q173 JEE Main 2021 · 27 Jul · Shift 1 MCQ

Staggered and eclipsed conformers of ethane are:

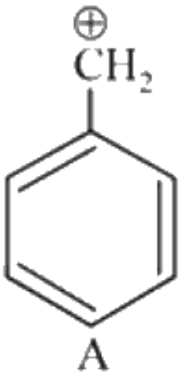
(A) Polymers
(B) Rotamers
(C) Enantiomers
(D) Mirror images

Answer: (B) Rotamers · Key from source paper

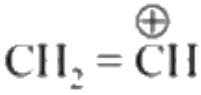
Q174 JEE Main 2021 · 27 Jul · Shift 1 MCQ

see figure

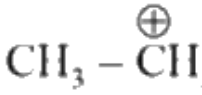
Q37.



A



B



C



D

The correct order of stability of given carbocation is:

(1) A > C > B > D

(2) D > B > C > A

(3) D > B > A > C

(4) C > A > D > B

(A) A > C > B > D

(B) D > B > C > A

(C) D > B > A > C

(D) C > A > D > B

Answer: (A) A > C > B > D · Key from source paper

Q175 JEE Main 2021 · 27 Jul · Shift 2 MCQ

Given below are two statements :

Statement I : Hyperconjugation is a permanent effect.

Statement II : Hyperconjugation in ethyl cation $\left(CH_3-\overset{+}{C}H_2\right)$ involves the overlapping of $C_{sp^2}-H_{1s}$ bond with empty 2p orbital of other carbon.

Choose the correct option:

(A) Both statement I and statement II are false

(B) Statement I is incorrect but statement II is true

(C) Statement I is correct but statement II is false

(D) Both Statement I and statement II are true.

Answer: (C) Statement I is correct but statement II is false · Key from source paper

---

Q176 JEE Main 2021 · 27 Jul · Shift 2 Numerical

The dihedral angle in staggered form of Newmann's projection of 1, 1, 1-Trichloro ethane is _____ degree. (Round off to the nearest integer) (Round off to the nearest integer)

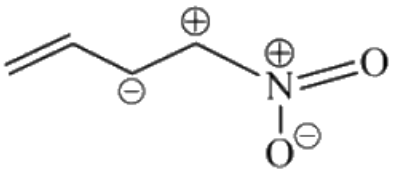
Numerical value type: the answer is a number.

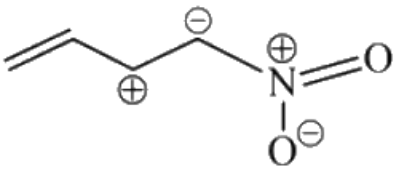
Answer: 60. · Key from source paper

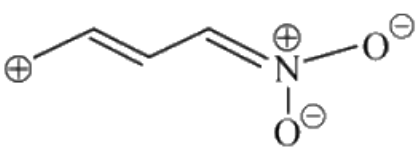
Q177 JEE Main 2021 · 25 Jul · Shift 1 MCQ

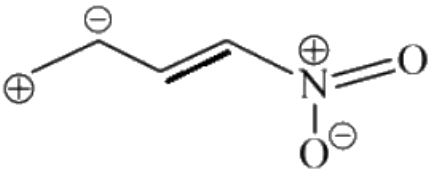
Which one among the following resonating structures is not correct?

Q35. Which one among the following resonating structures is not correct?

(1) 

(2) 

(3) 

(4) 

A *see figure*

B *see figure*

C *see figure*

D *see figure*

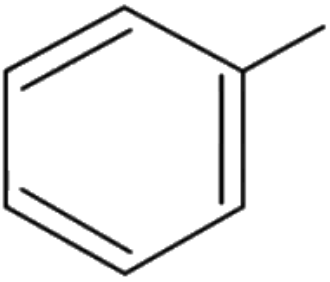
Answer: (A) · Key from source paper

Q178 JEE Main 2021 · 25 Jul · Shift 2 MCQ

Which among the following is the strongest acid?

Q39. Which among the following is the strongest acid?

(1) $CH_3\,CH_2\,CH_2\,CH_3$

(2) 

(3) 

(4) 

(A) $CH_3\ CH_2\ CH_2\ CH_3$

(B) *see figure*

(C) *see figure*

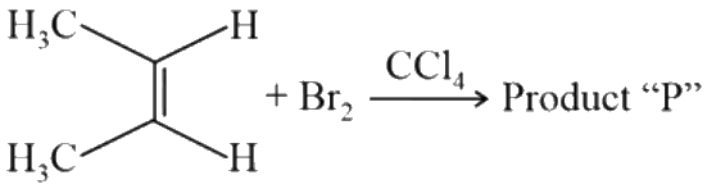
(D) *see figure*

Answer: (D) · Key from source paper

Q179 JEE Main 2021 · 25 Jul · Shift 2 Numerical

see figure

Q57.



Consider the above chemical reaction. The total number of stereoisomers possible for Product "P" is _____

Numerical value type: the answer is a number.

Accepted answers: 2 or 3. · Key from source paper

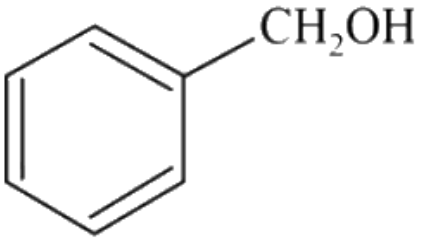
Q180 JEE Main 2021 · 22 Jul · Shift 1 MCQ

Which of the following compounds does not exhibit resonance ?

Q36. Which of the following compounds does not exhibit resonance ?

(1) $CH_3\ CH_2\ OCH = CH_2$

(2)



(3) $CH_3\ CH_2\ CH_2\ CONH_2$

(4) $CH_3\ CH_2\ CH = CHCH_2\ NH_2$

(A) $CH_3\ CH_2\ OCH = CH_2$

(B) *see figure*

(C) $CH_3\ CH_2\ CH_2\ CONH_2$

(D) $CH_3\ CH_2\ CH = CHCH_2\ NH_2$

Answer: (D) $CH_3\ CH_2\ CH = CHCH_2\ NH_2$ · Key from source paper

Q181 JEE Main 2021 · 22 Jul · Shift 1 MCQ

Which of the following molecules does not show stereo isomerism ?

(A) 3, 4-Dimethylhex-3-ene
(B) 3-Methylhex-1-ene
(C) 3-Ethylhex-3-ene
(D) 4-Methylhex-1-ene

Answer: (C) 3-Ethylhex-3-ene · Key from source paper

Q182 JEE Main 2021 · 22 Jul · Shift 1 Numerical

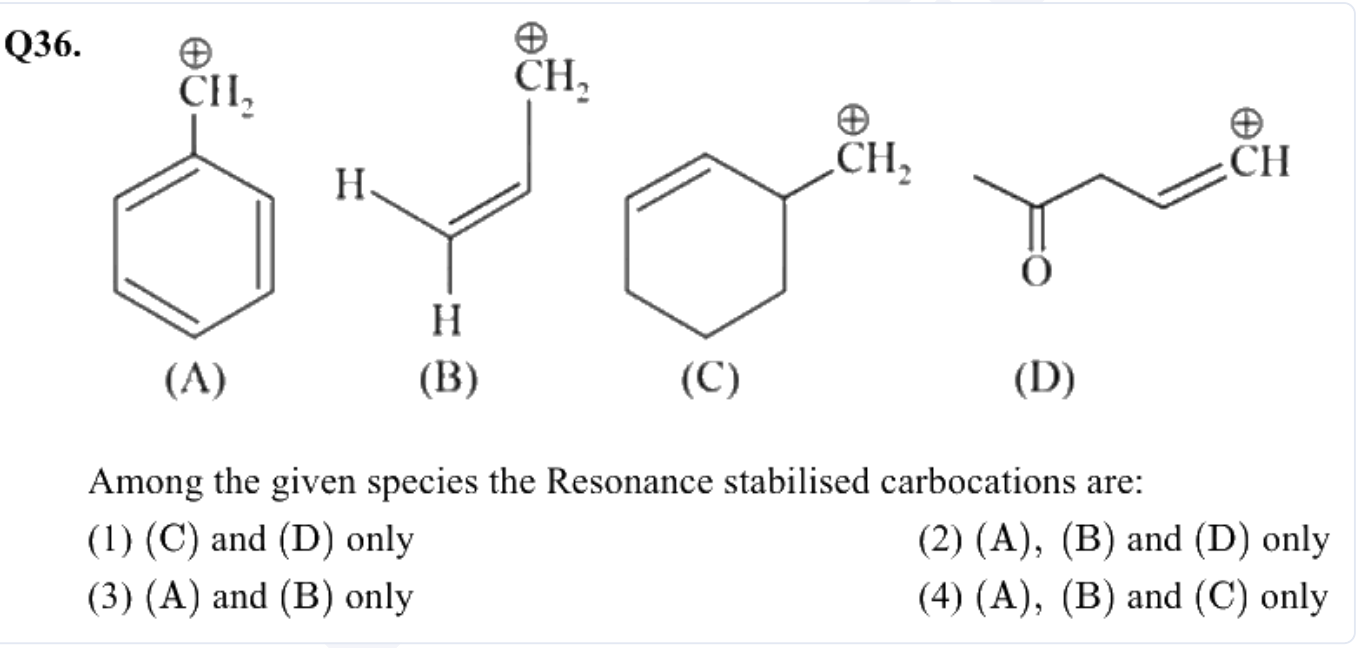
The number of acyclic structural isomers (including geometrical isomers) for pentene are _____

Numerical value type: the answer is a number.

Answer: 6. · Key from source paper

Q183 JEE Main 2021 · 20 Jul · Shift 1 MCQ

see figure



(A) (C) and (D) only
(B) (A), (B) and (D) only
(C) (A) and (B) only
(D) (A), (B) and (C) only

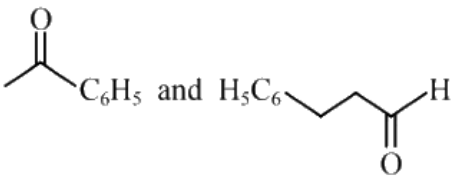
Answer: (C) (A) and (B) only · Key from source paper

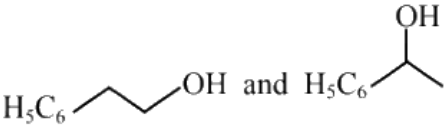
Q184 JEE Main 2021 · 20 Jul · Shift 2 MCQ

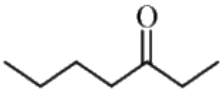
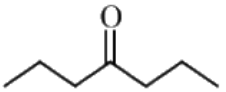
Which one of the following pairs of isomers is an example of metamerism?

Q38. Which one of the following pairs of isomers is an example of metamerism?

(1) $CH_3CH_2CH_2CH_2CH_3$ and $H_3C-\underset{\underset{CH_3}{|}}{\overset{\overset{CH}{|}}{C}}-CH_3$

(2)  and

(3) 

(4)  and 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (D) · Key from source paper

Q185 JEE Main 2021 · 18 Mar · Shift 1 MCQ

Compound with molecular formula C_3H_6O can show:

(A) Positional isomerism

(B) Both positional isomerism and metamerism

(C) Metamerism

(D) Functional group isomerism

Answer: (D) Functional group isomerism · Key from source paper

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Q186 JEE Main 2021 · 18 Mar · Shift 2 MCQ

Given below are two statements :

Statement I : C_2H_5OH and $AgCN$ both can generate nucleophile.

Statement II : KCN and $AgCN$ both will generate nitrile nucleophile with all reaction conditions.

Choose the most appropriate option :

(A) Statement I is true but statement II is false

(B) Both statement I and statement II are true

(C) Statement I is false but statement II is true

(D) Both statement I and statement II are false

Answer: (A) Statement I is true but statement II is false · Key from source paper

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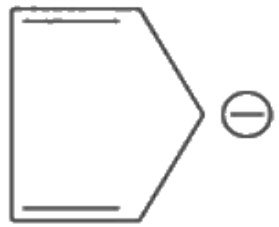
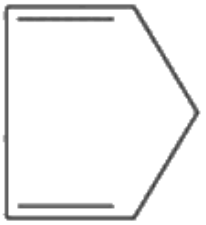
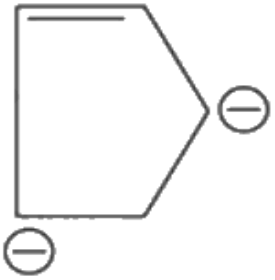
Q187 JEE Main 2021 · 17 Mar · Shift 1 MCQ

Which of the following is an aromatic compound?

Q36. Which of the following is an aromatic compound?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (A) · Key from source paper

Q188 JEE Main 2021 · 17 Mar · Shift 1 MCQ

Mesityl oxide is a common name of:

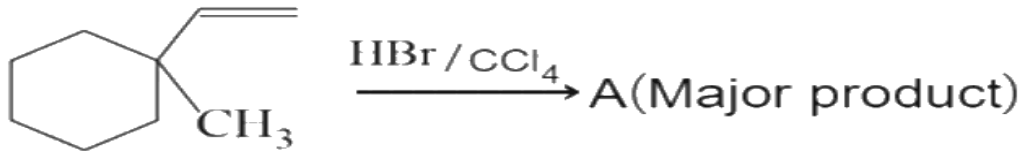
(A) 2, 4 -Dimethylpentan-3-one
(B) 3-Methylcyclohexanecarbaldehyde
(C) 2-Methylcyclohexanone
(D) 4-Methylpent-3-en-2-one

Answer: (D) 4-Methylpent-3-en-2-one · Key from source paper

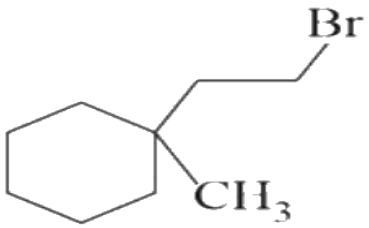
Q189 JEE Main 2021 · 17 Mar · Shift 1 MCQ

see figure

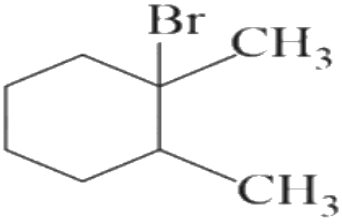
Q39.



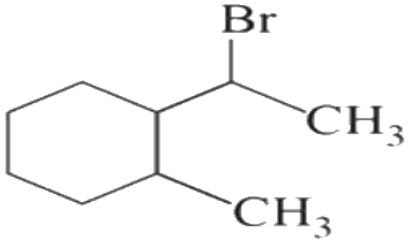
(1)



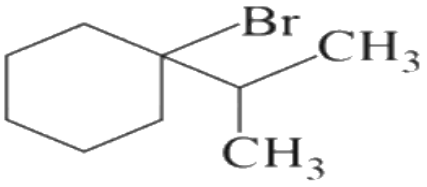
(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

Q190 JEE Main 2021 · 17 Mar · Shift 2 MCQ

The correct pair(s) of the ambident nucleophiles is (are):
(A) $\mathrm{AgCN/KCN}$
(B) $\mathrm{RCOOAg/RCOOK}$
(C) $\mathrm{AgNO_2/KNO_2}$
(D) $\mathrm{AgI/KI}$

(A) (B) and (C) only
(B) (A) only
(C) (A) and (C) only
(D) (B) only

Answer: (C) (A) and (C) only · Key from source paper

Q191 JEE Main 2021 · 17 Mar · Shift 2 MCQ

Choose the correct statement regarding the formation of carbocations A and B given :-
$\mathrm{CH_3-CH_2-CH=CH_2+HBr}$ gives
"A" : $\mathrm{CH_3-CH_2-CH_2-\overset{+}{C}H_2+Br^-}$
"B" : $\mathrm{CH_3-CH_2-\overset{+}{C}H-CH_3+Br^-}$

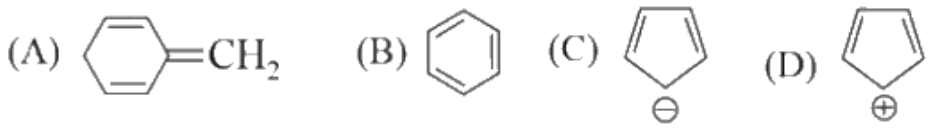
(A) Carbocation B is more stable and formed relatively at faster rate
(B) Carbocation A is more stable and formed relatively at slow rate
(C) Carbocation B is more stable and formed relatively at slow rate
(D) Carbocation A is more stable and formed relatively at faster rate

Answer: (A) Carbocation B is more stable and formed relatively at faster rate · Key from source paper

Q192 JEE Main 2021 · 16 Mar · Shift 1 MCQ

Among the following, the aromatic compounds are :
(see the figure above)
Choose the correct answer from the following options :

Q35. Among the following, the aromatic compounds are :



Choose the correct answer from the following options :

(1) (A) and (B) only
(2) (B) and (C) only
(3) (B), (C) and (D) only
(4) (A), (B) and (C) only

(A) (A) and (B) only
(B) (B) and (C) only
(C) (B), (C) and (D) only
(D) (A), (B) and (C) only

Answer: (B) (B) and (C) only · Key from source paper

Q193 JEE Main 2021 · 16 Mar · Shift 1 MCQ

Assertion A : Enol form of acetone $[CH_3COCH_3]$ exists in $< 0.1\%$ quantity. However, the enol form of acetyl acetone $[CH_3COCH_2OCCH_3]$ exists in approximately 15% quantity.
Reason R : enol form of acetyl acetone is stabilized by intramolecular hydrogen bonding, which is not possible in enol form of acetone.
Choose the correct statement:

(A) A is false but R is true
(B) Both A and R are true and R is the correct explanation of A
(C) Both A and R are true but R is not the correct explanation of A
(D) A is true but R is false

Answer: (B) Both A and R are true and R is the correct explanation of A · Key from source paper

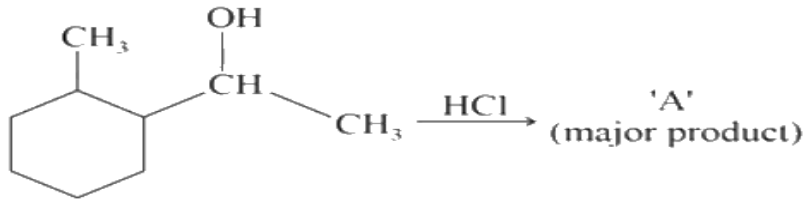
Q194 JEE Main 2021 · 24 Feb · Shift 1 MCQ

What is the final product (major) 'A' in the given reaction?

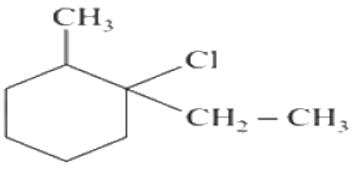
(see the figure above)

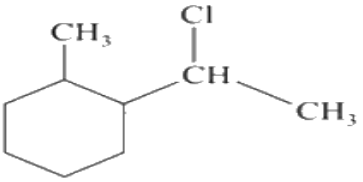
Major product among the following is?

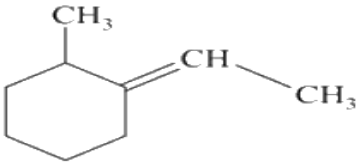
Q45. What is the final product (major) 'A' in the given reaction?

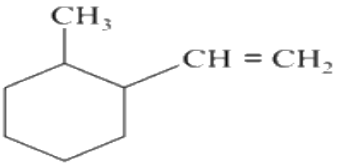


Major product among the following is?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (A) · Key from source paper

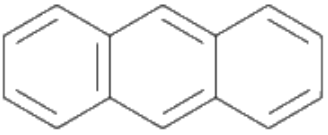
Q195 JEE Main 2021 · 24 Feb · Shift 2 MCQ

Which one of the following compounds is non-aromatic?

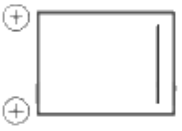
(see the figure above)

Q36. Which one of the following compounds is non-aromatic?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q196 JEE Main 2020 · 6 Sep · Shift 1 MCQ

Which of the following compounds shows geometrical isomerism?

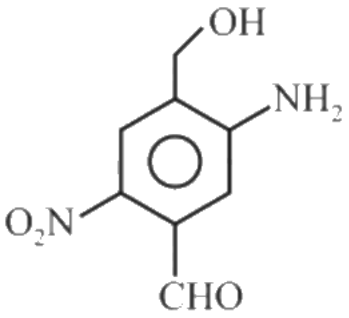
(A) 2-methylpent-2-ene
(B) 4-methylpent-2-ene
(C) 4-methylpent-1-ene
(D) 2-methylpent-1-ene

Answer: (B) 4-methylpent-2-ene · Key from source paper

Q197 JEE Main 2020 · 6 Sep · Shift 2 MCQ

The IUPAC name of following compound is :
(see the figure above)

Q32. The IUPAC name of following compound is :



(1) 2-nitro-4-hydroxymethyl-5-amino benzaldehyde (2) 3-amino-4-hydroxymethyl-5-nitrogenzaldehyde
(3) 5-amino-4-hydroxymethyl-2-nitrobenzaldehyde (4) 4-amino-2-formyl-5-hydroxymethyl nitrogenzene

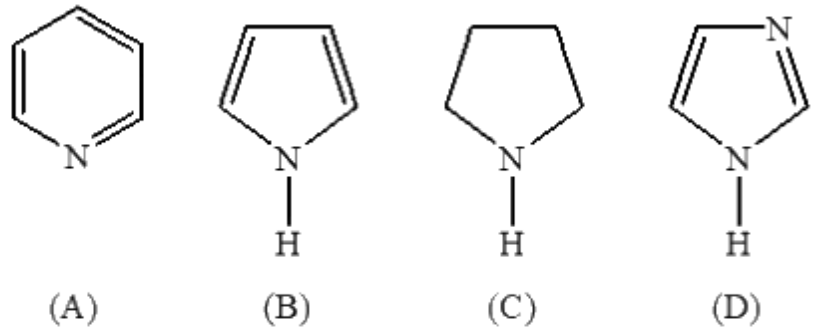
(A) 2-nitro-4-hydroxymethyl-5-amino benzaldehyde
(B) 3-amino-4-hydroxymethyl-5-nitrogenzaldehyde
(C) 5-amino-4-hydroxymethyl-2-nitrobenzaldehyde
(D) 4-amino-2-formyl-5-hydroxymethyl nitrogenzene

Answer: (C) 5-amino-4-hydroxymethyl-2-nitrobenzaldehyde · Key from source paper

Q198 JEE Main 2020 · 5 Sep · Shift 1 MCQ

The increasing order of basicity of the following compounds is :
(see the figure above)

Q43. The increasing order of basicity of the following compounds is :



(1) (A) < (B) < (C) < (D)
(2) (B) < (A) < (D) < (C)
(3) (D) < (A) < (B) < (C)
(4) (B) < (A) < (C) < (D)

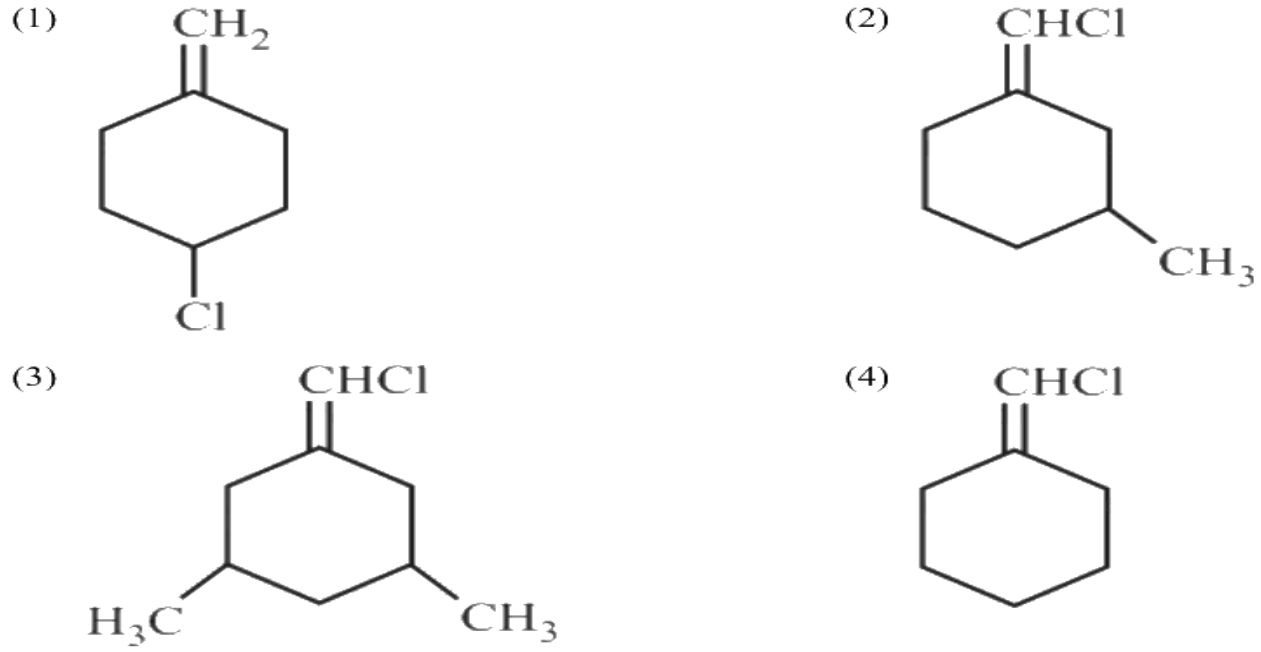
A (A) < (B) < (C) < (D)
B (B) < (A) < (D) < (C)
C (D) < (A) < (B) < (C)
D (B) < (A) < (C) < (D)

Answer: (B) (B) < (A) < (D) < (C) · Key from source paper

Q199 JEE Main 2020 · 5 Sep · Shift 2 MCQ

Among the following compounds, geometrical isomerism is exhibited by :
(see the figure above)

Q33. Among the following compounds, geometrical isomerism is exhibited by :



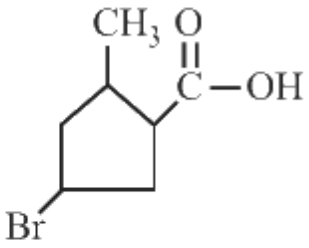
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q200 JEE Main 2020 · 4 Sep · Shift 1 MCQ

The IUPAC name of the following compound is:
(see the figure above)

Q33. The IUPAC name of the following compound is:



(1) 5-Bromo-3-methylcyclopentanoic acid
(2) 4-Bromo-2-methylcyclopentane carboxylic acid
(3) 3-Bromo-5-methylcyclopentanoic acid
(4) 3-Bromo-5-methylcyclopentanoic carboxylic acid

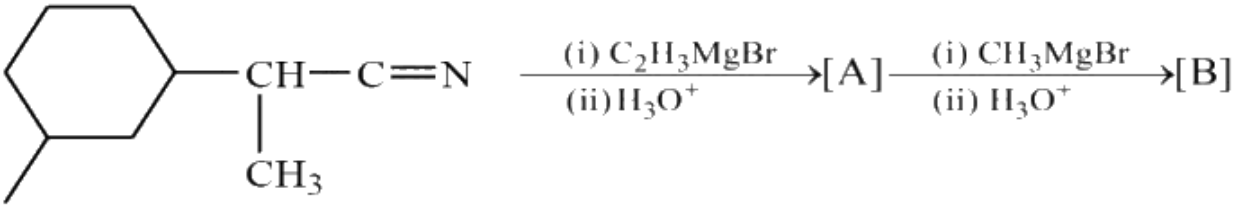
(A) 5-Bromo-3-methylcyclopentanoic acid
(B) 4-Bromo-2-methylcyclopentane carboxylic acid
(C) 3-Bromo-5-methylcyclopentanoic acid
(D) 3-Bromo-5-methylcyclopentanoic carboxylic acid

Answer: (B) 4-Bromo-2-methylcyclopentane carboxylic acid · Key from source paper

Q201 JEE Main 2020 · 4 Sep · Shift 1 Numerical

The number of chiral centres present in [B] is _____
(see the figure above)

Q50. The number of chiral centres present in [B] is _____



Numerical value type: the answer is a number.

Answer: 4. · Key from source paper

Q202 JEE Main 2020 · 4 Sep · Shift 2 Numerical

The number of chiral centres present in threonine is _____

Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

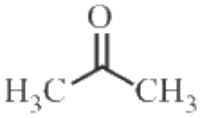
Q203 JEE Main 2020 · 3 Sep · Shift 1 MCQ

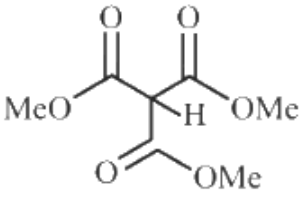
Which one of the following compounds possesses the most acidic hydrogen?

Q30. Which one of the following compounds possesses the most acidic hydrogen?

(1) 

(2) $H_3C - C \equiv C - H$

(3) 

(4) 

(A) *see figure*

(B) $H_3C - C \equiv C - H$

(C) *see figure*

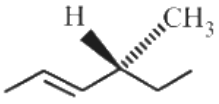
(D) *see figure*

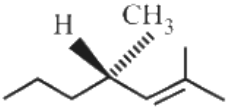
Answer: (D) · Key from source paper

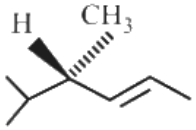
Q204 JEE Main 2020 · 3 Sep · Shift 1 MCQ

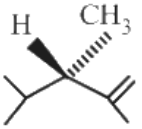
Which of the following compounds produces an optically inactive compound on hydrogenation?

Q33. Which of the following compounds produces an optically inactive compound on hydrogenation?

(1) 

(2) 

(3) 

(4) 

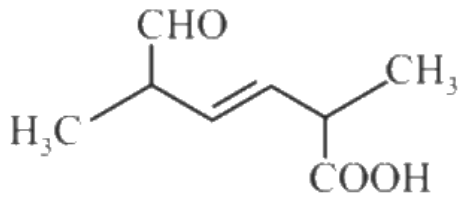
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

Q205 JEE Main 2020 · 2 Sep · Shift 1 MCQ

The IUPAC name for the following compound is :
(see the figure above)

Q37. The IUPAC name for the following compound is :



(1) 2, 5-dimenthyl-5-carboxy-hex-3-enal
(2) 2, 5-dimenthyl-6-carboxy-hex-3-enal
(3) 2, 5-dimenthyl-6-carboxy-hex-3-enoic acid
(4) 6-formyl-2-methy 1-hex-3-enoic acid

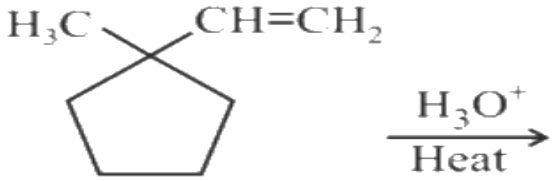
(A) 2, 5-dimenthyl-5-carboxy-hex-3-enal
(B) 2, 5-dimenthyl-6-carboxy-hex-3-enal
(C) 2, 5-dimenthyl-6-carboxy-hex-3-enoic acid
(D) 6-formyl-2-methy 1-hex-3-enoic acid

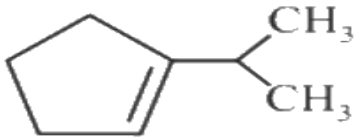
Answer: (C) 2, 5-dimenthyl-6-carboxy-hex-3-enoic acid · Key from source paper

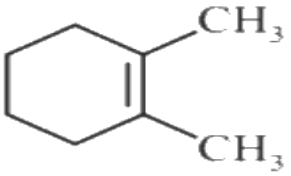
Q206 JEE Main 2020 · 2 Sep · Shift 1 MCQ

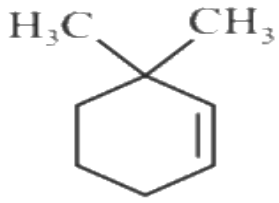
The major product in the following reaction is :
(see the figure above)

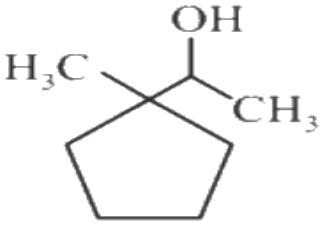
Q38. The major product in the following reaction is :



(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

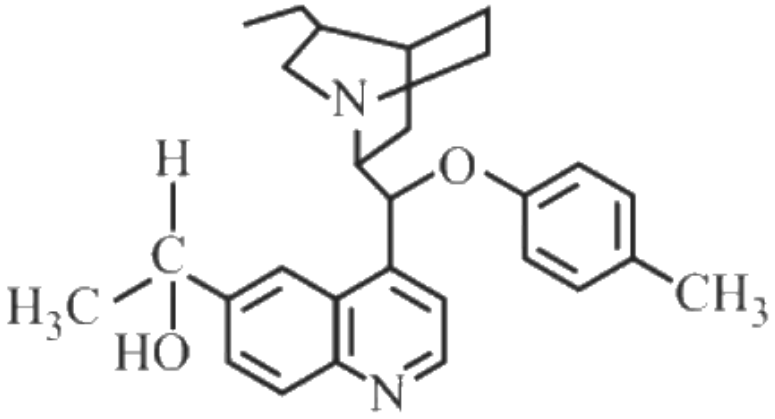
Answer: (B) · Key from source paper

Q207 JEE Main 2020 · 2 Sep · Shift 1 Numerical

The number of chiral carbons present in the molecule given below is.....

(see the figure above)

Q48. The number of chiral carbons present in the molecule given below is.....



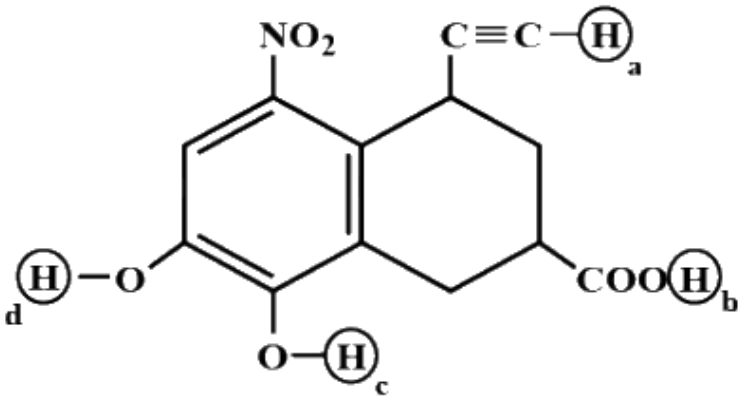
Numerical value type: the answer is a number.

Answer: 5. · Key from source paper

Q208 JEE Main 2020 · 2 Sep · Shift 2 MCQ

Arrange the following labelled hydrogens in decreasing order of acidity:
(see the figure above)

Q32. Arrange the following labelled hydrogens in decreasing order of acidity:



(1) b > a > c > d
(2) c > b > a > d
(3) b > c > d > a
(4) c > b > d > a

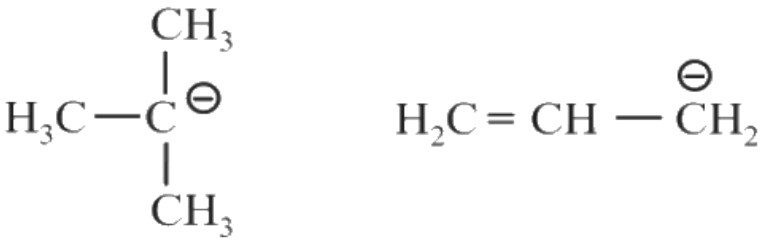
(A) b > a > c > d
(B) c > b > a > d
(C) b > c > d > a
(D) c > b > d > a

Answer: (C) b > c > d > a · Key from source paper

Q209 JEE Main 2020 · 9 Jan · Shift 1 MCQ

The increasing order of basicity for the following intermediates is (from weak to strong)
(see the figure above)

Q34. The increasing order of basicity for the following intermediates is (from weak to strong)



(i) (ii)



(iii) (iv) (v)

(1) (iii) < (i) < (ii) < (iv) < (v)
(2) (v) < (i) < (iv) < (ii) < (iii)
(3) (v) < (iii) < (ii) < (iv) < (i)
(4) (iii) < (iv) < (ii) < (i) < (v)

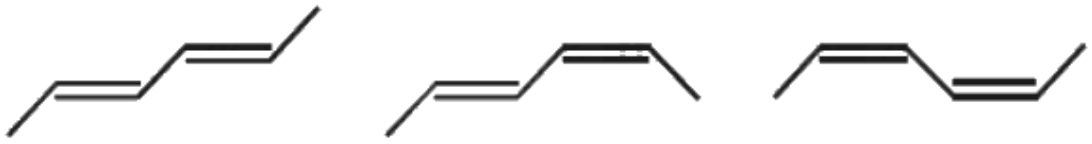
(A) (iii) < (i) < (ii) < (iv) < (v)
(B) (v) < (i) < (iv) < (ii) < (iii)
(C) (v) < (iii) < (ii) < (iv) < (i)
(D) (iii) < (iv) < (ii) < (i) < (v)

Answer: (C) (v) < (iii) < (ii) < (iv) < (i) · Key from source paper

Q210 JEE Main 2020 · 9 Jan · Shift 1 MCQ

The correct order of heat of combustion for following alkadienes is:
(see the figure above)

Q35. The correct order of heat of combustion for following alkadienes is:



(a) (b) (c)

(1) (a) < (b) < (c)
(2) (a) < (c) < (b)
(3) (c) < (b) < (a)
(4) (b) < (c) < (a)

(A) (a) < (b) < (c)
(B) (a) < (c) < (b)
(C) (c) < (b) < (a)
(D) (b) < (c) < (a)

Answer: (A) (a) < (b) < (c) · Key from source paper

Q211 JEE Main 2020 · 9 Jan · Shift 2 MCQ

Which of the following has the shortest $C - Cl$ bond?

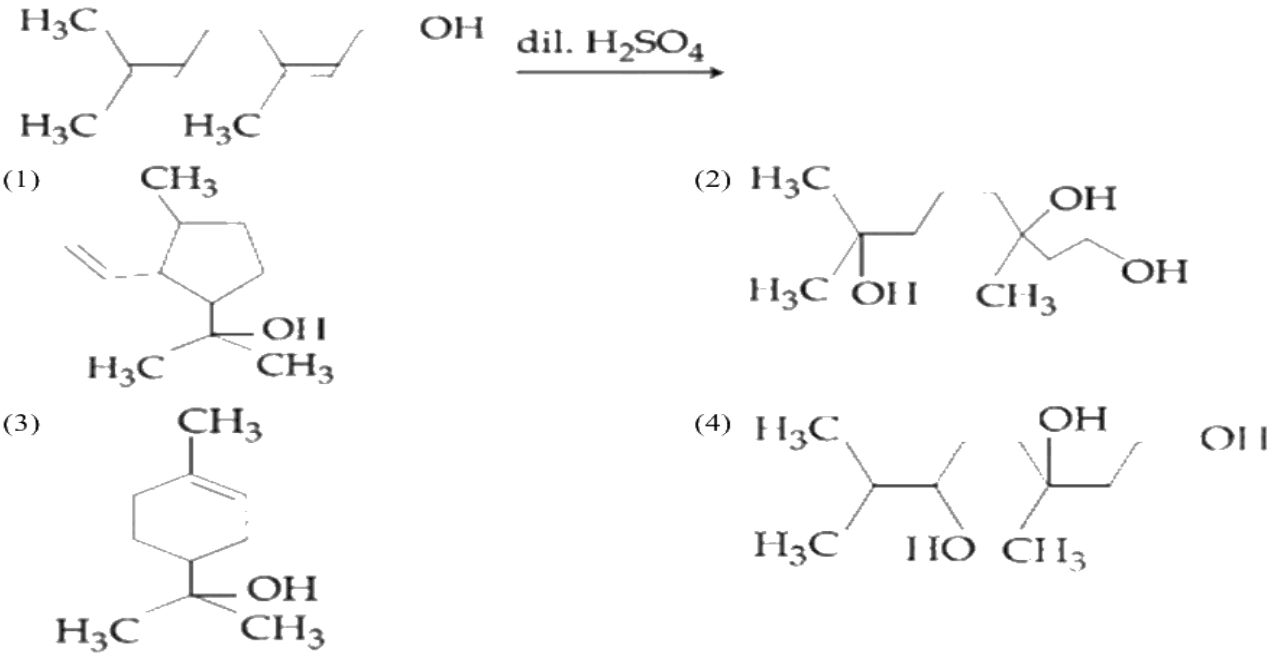
(A) $Cl - CH = CH_2$
(B) $Cl - CH = CH - NO_2$
(C) $Cl - CH = CH - CH_3$
(D) $Cl - CH = CH - OCH_3$

Answer: (B) $Cl - CH = CH - NO_2$ · Key from source paper

Q212 JEE Main 2020 · 8 Jan · Shift 1 MCQ

The major product of the following reaction is:
(see the figure above)

Q42. The major product of the following reaction is:



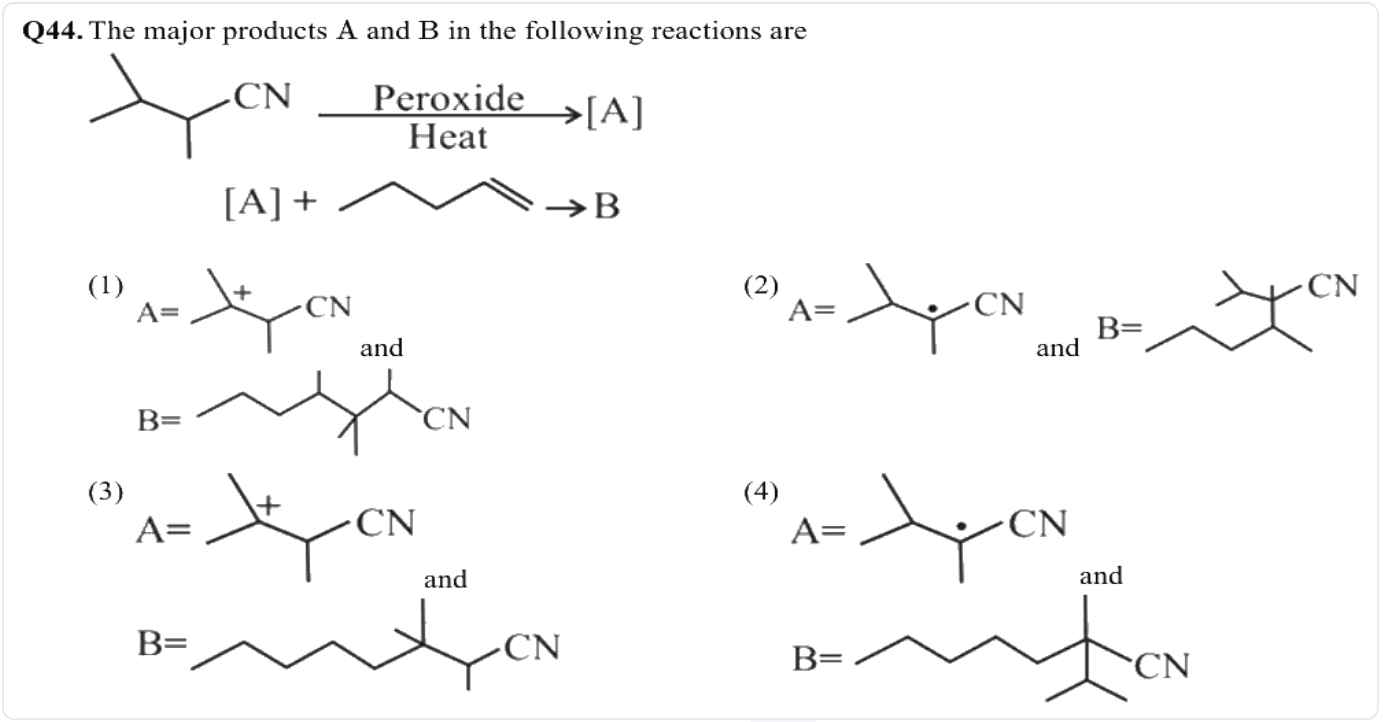
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q213 JEE Main 2020 · 8 Jan · Shift 1 MCQ

The major products A and B in the following reactions are

(see the figure above)



(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (D) · Key from source paper

Q214 JEE Main 2020 · 8 Jan · Shift 1 Numerical

The number of chiral centres in penicillin is _____.

Numerical value type: the answer is a number.

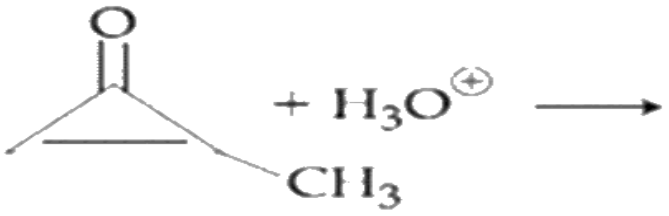
Answer: 3. · Key from source paper

Q215 JEE Main 2020 · 8 Jan · Shift 2 MCQ

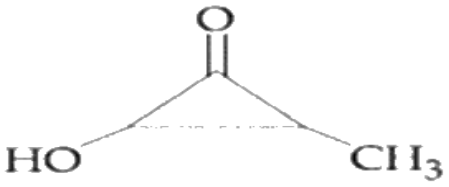
The major product in the following reaction is:

(see the figure above)

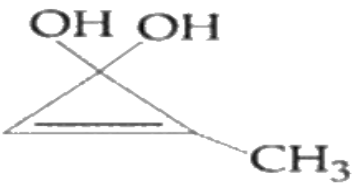
Q38. The major product in the following reaction is:



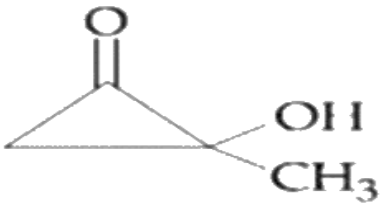
(1)



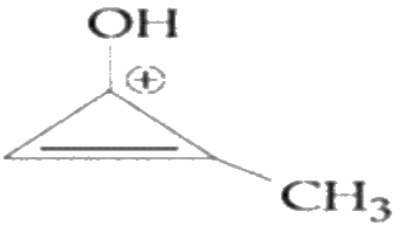
(2)



(3)



(4)



(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (D) · Key from source paper

Q216 JEE Main 2020 · 7 Jan · Shift 1 MCQ

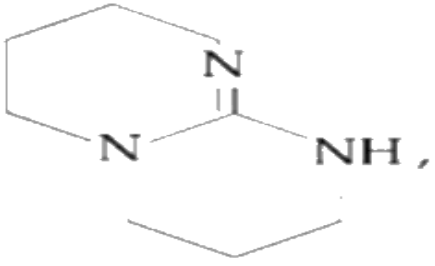
The increasing order of pK_b for the following compounds will be :

(see the figure above)

Q34. The increasing order of pK_b for the following compounds will be :

$NH_2-CH=NH$,

(A)



(B)

CH_3NHCH_3

(C)

(1) (B) < (C) < (A)

(2) (A) < (B) < (C)

(3) (C) < (A) < (B)

(4) (B) < (A) < (C)

(A) (B) < (C) < (A)

(B) (A) < (B) < (C)

(C) (C) < (A) < (B)

(D) (B) < (A) < (C)

Answer: (D) (B) < (A) < (C) · Key from source paper

Q217 JEE Main 2020 · 7 Jan · Shift 1 Numerical

The number of chiral carbons in chloramphenicol is _____ .

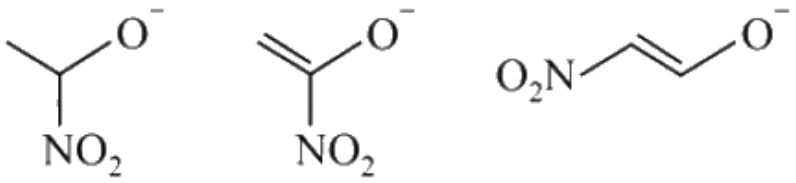
Numerical value type: the answer is a number.

Answer: 2. · Key from source paper

Q218 JEE Main 2020 · 7 Jan · Shift 2 MCQ

The correct order of stability for the following alkoxides is:
(see the figure above)

Q32. The correct order of stability for the following alkoxides is:



(A) (B) (C)

(1) (B) > (A) > (C)
(2) (C) > (B) > (A)
(3) (C) > (A) > (B)
(4) (B) > (C) > (A)

(A) (B) > (A) > (C)

(B) (C) > (B) > (A)

(C) (C) > (A) > (B)

(D) (B) > (C) > (A)

Answer: (B) (C) > (B) > (A) · Key from source paper

Q219 JEE Main 2019 · 12 Apr · Shift 1 MCQ

The increasing order of the pK_b of the following compund is:

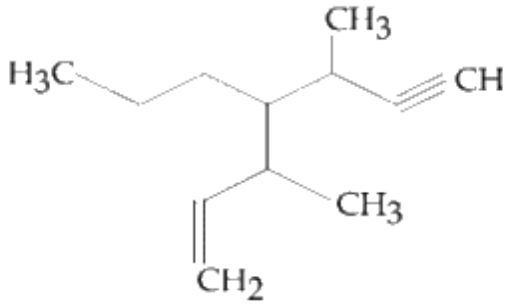
(A) (B) < (D) < (C) < (A)
(B) (B) < (D) < (A) < (C)
(C) (C) < (A) < (D) < (B)
(D) (A) < (C) < (D) < (B)

Answer: (B) (B) < (D) < (A) < (C) · Key from source paper

Q220 JEE Main 2019 · 12 Apr · Shift 2 MCQ

The IUPAC name for the following compound is:
(see the figure above)

Q40. The IUPAC name for the following compound is:



(1) 3−methyl−4−(1−methylprop−2−ynyl)−1−heptene
(2) 3, 5−dimethyl−4−propylhept−6−en−1−yne
(3) 3, 5−dimethyl−4−propyl hept−1−en−6−yne
(4) 3−methyl−4−(3−methylprop−1−enhyl)−1−heptyne

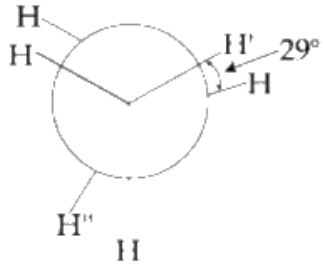
(A) 3−methyl−4−(1−methylprop−2−ynyl)−1−heptene
(B) 3, 5−dimethyl−4−propylhept−6−en−1−yne
(C) 3, 5−dimethyl−4−propyl hept−1−en−6−yne
(D) 3−methyl−4−(3−methylprop−1−enhyl)−1−heptyne

Answer: (C) 3, 5−dimethyl−4−propyl hept−1−en−6−yne · Key from source paper

Q221 JEE Main 2019 · 12 Apr · Shift 2 MCQ

In the following skew conformation of ethane, $H' - C - C - H''$ dihedral angle is:
(see the figure above)

Q42. In the following skew conformation of ethane, $H' - C - C - H''$ dihedral angle is:



(1) 58° (2) 120°

(3) 149° (4) 151°

(A) 58°

(B) 120°

(C) 149°

(D) 151°

Answer: (C) 149° · Key from source paper

Q222 JEE Main 2019 · 10 Apr · Shift 2 MCQ

The increasing order of nucleophilicity of the following nucleophiles is;

(i) $CH_3CO_2^{\ominus}$

(ii) H_2O

(iii) $CH_3SO_3^{\ominus}$

(iv) $\overset{\ominus}{O}H$

(A) (i) < (iv) < (iii) < (ii)

(B) (ii) < (iii) < (iv) < (i)

(C) iv < i < iii < ii

(D) (ii) < (iii) < (i) < (iv)

Answer: (D) (ii) < (iii) < (i) < (iv) · Key from source paper

Q223 JEE Main 2019 · 10 Apr · Shift 2 MCQ

Which of these factors does not govern the stability of a conformation in acyclic compounds?

(A) Steric interactions

(B) Angle strain

(C) Torsional strain

(D) Electrostatic forces of interaction

Answer: (B) Angle strain · Key from source paper

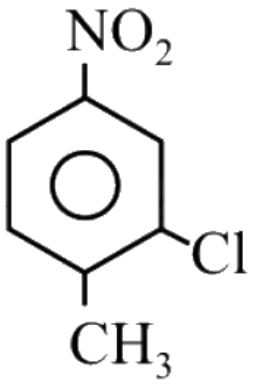
EdLoop JEE

Q224 JEE Main 2019 · 9 Apr · Shift 1 MCQ

The correct IUPAC name of the following compound is:

(see the figure above)

Q39. The correct IUPAC name of the following compound is:



(1) 5−chloro−4−methyl−1−nitrobenzene.
(2) 2−chloro−1−methyl−4−nitrobenzene.
(3) 2−methyl−5−nitro−1−chlorobenzene.
(4) 3−chloro−4−methyl−1−nitrobenzene.

(A) 5−chloro−4−methyl−1−nitrobenzene.
(B) 2−chloro−1−methyl−4−nitrobenzene.
(C) 2−methyl−5−nitro−1−chlorobenzene.
(D) 3−chloro−4−methyl−1−nitrobenzene.

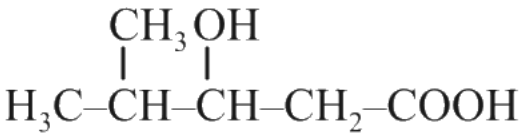
Answer: (B) 2−chloro−1−methyl−4−nitrobenzene. · Key from source paper

Q225 JEE Main 2019 · 8 Apr · Shift 1 MCQ

The IUPAC name of the following compound is:

(see the figure above)

Q41. The IUPAC name of the following compound is:



(1) 4 - Methyl - 3 - hydroxypentanoic acid
(2) 4, 4 - Dimethyl - 3 - hydroxybutanoic acid
(3) 2 - Methyl - 3 - hydroxypentan - 5 - oic acid
(4) 3 - Hydroxy - 4 - methylpentanoic acid

(A) 4 - Methyl - 3 - hydroxypentanoic acid
(B) 4, 4 - Dimethyl - 3 - hydroxybutanoic acid
(C) 2 - Methyl - 3 - hydroxypentan - 5 - oic acid
(D) 3 - Hydroxy - 4 - methylpentanoic acid

Answer: (D) 3 - Hydroxy - 4 - methylpentanoic acid · Key from source paper

Q226 JEE Main 2019 · 8 Apr · Shift 2 MCQ

Which of the following compounds will show the maximum 'enol' content?

(A) $CH_3COCH_2CONH_2$
(B) $CH_3COCH_2COCH_3$
(C) $CH_3COCH_2COOC_2H_5$
(D) CH_3COCH_3

Answer: (B) $CH_3COCH_2COCH_3$ · Key from source paper

Q227 JEE Main 2019 · 11 Jan · Shift 1 MCQ

Which compound (s) out of the following is/are not aromatic? (A)

(see the figure above)

(B)

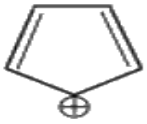
(C)

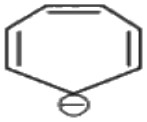
(D)

Q40.



Which compound (s) out of the following is/are not aromatic? (A)

(B) 

(C) 

(D) 

(1) (B), (C) and (D)
(2) (C) and (D)
(3) (B)
(4) (A) and (C)

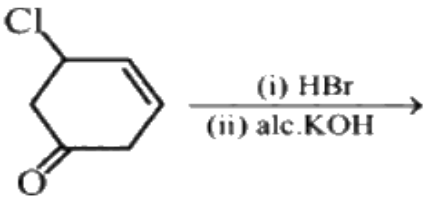
(A) (B), (C) and (D)
(B) (C) and (D)
(C) (B)
(D) (A) and (C)

Answer: (A) (B), (C) and (D) · Key from source paper

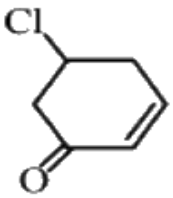
Q228 JEE Main 2019 · 11 Jan · Shift 1 MCQ

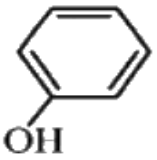
see figure

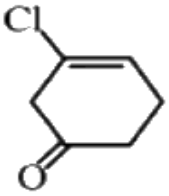
Q54.

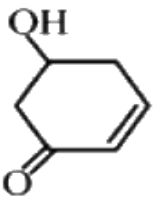


The major product of the following reaction is

(1)


(2)


(3)


(4)


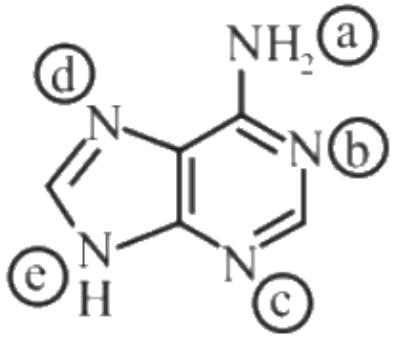
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q229 JEE Main 2019 · 11 Jan · Shift 2 MCQ

see figure

Q56.



In the following compound,
the favourable site/s for protonation is/are :

(1) (a) and (e)
(2) (b), (c) and (d)
(3) (a) and (d)
(4) (a)

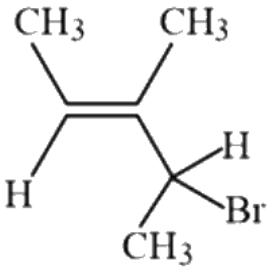
(A) (a) and (e)
(B) (b), (c) and (d)
(C) (a) and (d)
(D) (a)

Answer: (B) (b), (c) and (d) · Key from source paper

Q230 JEE Main 2019 · 10 Jan · Shift 2 MCQ

What is the IUPAC name of the following compound?
(see the figure above)

Q38. What is the IUPAC name of the following compound?



(1) 4−Bromo−3−methylpent−2−ene
(2) 3−Bromo−3−methyl−1, 2−dimethylprop−1−ene
(3) 2−Bromo−3−methyl pent−3−ene
(4) 3−Bromo−1, 2−dimethylbut−1−ene

(A) 4-Bromo-3-methylpent-2-ene
(B) 3-Bromo-3-methyl-1, 2-dimethylprop-1-ene
(C) 2-Bromo-3-methyl pent-3-ene
(D) 3-Bromo-1, 2-dimethylbut-1-ene

Answer: (A) 4-Bromo-3-methylpent-2-ene · Key from source paper

Q231 JEE Main 2019 · 9 Jan · Shift 1 MCQ

Which amongst the following is the strongest acid?

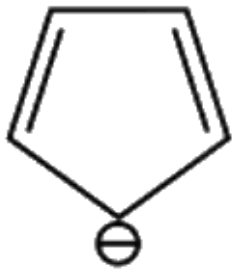
(A) $CHCN_3$
(B) CHI_3
(C) $CHBr_3$
(D) $CHCl_3$

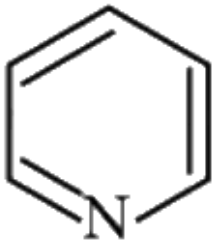
Answer: (A) $CHCN_3$ · Key from source paper

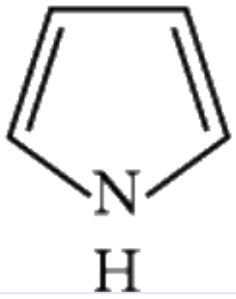
Q232 JEE Main 2019 · 9 Jan · Shift 2 MCQ

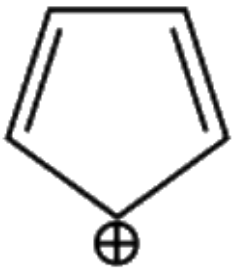
Which of the following compounds is not aromatic?
(see the figure above)

Q38. Which of the following compounds is not aromatic?

(1) 

(2) 

(3) 

(4) 

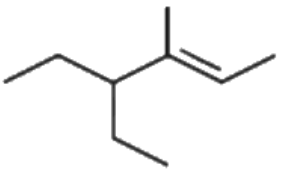
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

Q233 JEE Main 2018 · 15 Apr · Shift 1 MCQ

see figure

Q46.



The IUPAC name of the following compound is :

(1) 3–ethyl–4–methylhex–4–ene
(2) 4, 4–diethyl–3–methylbut–2–ene
(3) 4–methyl–3–ethylhex–4–ene
(4) 4–ethyl–3–methylhex–2–ene

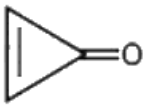
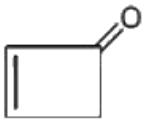
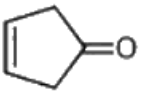
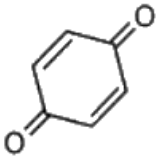
(A) 3–ethyl–4–methylhex–4–ene
(B) 4, 4–diethyl–3–methylbut–2–ene
(C) 4–methyl–3–ethylhex–4–ene
(D) 4–ethyl–3–methylhex–2–ene

Answer: (D) 4–ethyl–3–methylhex–2–ene · Key from source paper

Q234 JEE Main 2017 · 9 Apr · Online MCQ

Among the following compounds, the compound which shows the highest dipole-moment is
(see the figure above)

Q36. Among the following compounds, the compound which shows the highest dipole-moment is

(I)  (II)  (III)  (IV) 

(1) (II)
(2) (IV)
(3) (III)
(4) (I)

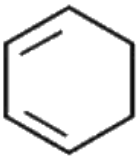
A (II)
B (IV)
C (III)
D (I)

Answer: (D) (I) · Key from source paper

Q235 JEE Main 2017 · 9 Apr · Online MCQ

Which of the following compounds is most reactive to an aqueous solution of sodium carbonate?

Q43. Which of the following compounds is most reactive to an aqueous solution of sodium carbonate?

(1) 
(2) 
(3) 
(4) 

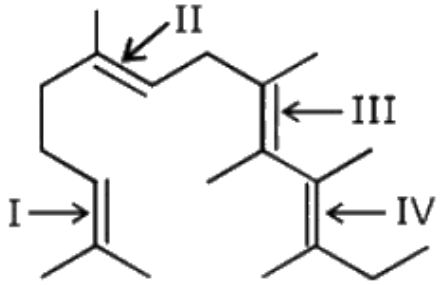
A *see figure*
B *see figure*
C *see figure*
D *see figure*

Answer: (C) · Key from source paper

Q236 JEE Main 2017 · 9 Apr · Online MCQ

In the following structure, the double bonds are marked as I, II, III and IV.
(see the figure above)
Geometrical isomerism is not possible at the site(s):

Q44. In the following structure, the double bonds are marked as I, II, III and IV.



Geometrical isomerism is not possible at the site(s):

(1) I and III
(2) III
(3) I
(4) III and IV

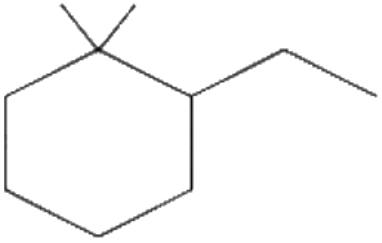
(A) I and III
(B) III
(C) I
(D) III and IV

Answer: (C) I · Key from source paper

Q237 JEE Main 2017 · 8 Apr · Online MCQ

The IUPAC name of the following compound is:
(see the figure above)

Q44. The IUPAC name of the following compound is:



(1) 2−Ethyl−1, 1−dimethyl cyclohexane
(2) 1, 1−Dimethyl−2−ethyl cyclohexane
(3) 2, 2−Dimethyl−1 − 1−ethyl cyclohexane
(4) 1−Ethyl−2, 2−dimethyl cyclohexane

(A) 2−Ethyl−1, 1−dimethyl cyclohexane
(B) 1, 1−Dimethyl−2−ethyl cyclohexane
(C) 2, 2−Dimethyl−1 − 1−ethyl cyclohexane
(D) 1−Ethyl−2, 2−dimethyl cyclohexane

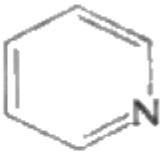
Answer: (A) 2−Ethyl−1, 1−dimethyl cyclohexane · Key from source paper

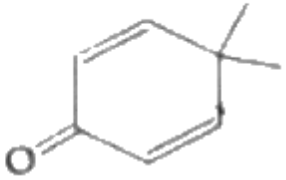
Q238 JEE Main 2017 · 2 Apr · Offline MCQ

Which of the following molecules is least resonance stabilized?

Q40. Which of the following molecules is least resonance stabilized?

(1) 

(2) 

(3) 

(4) 

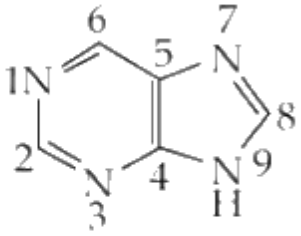
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q239 JEE Main 2016 · 10 Apr · Online MCQ

The N which contribute least to the basicity of the compound is :
(see the figure above)

Q57. The N which contribute least to the basicity of the compound is :



(1) N -9
(2) N -3
(3) N -1
(4) N -7

(A) N -9
(B) N -3
(C) N -1
(D) N -7

Answer: (A) N -9 · Key from source paper

Q240 JEE Main 2016 · 9 Apr · Online MCQ

The hydrocarbon with seven carbon atoms containing a neopentyl and a vinyl group is:

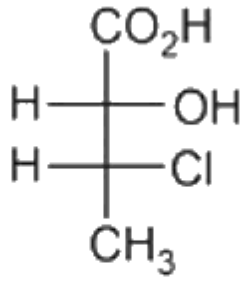
(A) 2, 2 - dimethyl - 4 - pentene
(B) 4, 4 - dimethylpent - 1 - ene
(C) Isopropyl - 2 - butene
(D) 2, 2 - dimethyl - 3 - pentene

Answer: (B) 4, 4 - dimethylpent - 1 - ene · Key from source paper

Q241 JEE Main 2016 · 3 Apr · Offline MCQ

The absolute configuration of
(see the figure above)
is:

Q40. The absolute configuration of



is:

(1) (2S, 3S) (2) (2R, 3R)
(3) (2R, 3S) (4) (2S, 3R)

(A) (2S, 3S)
(B) (2R, 3R)
(C) (2R, 3S)
(D) (2S, 3R)

Answer: (D) (2S, 3R) · Key from source paper

Q242 JEE Main 2015 · 11 Apr · Online MCQ

The number of structural isomers for C_6H_{14} is:

(A) 4
(B) 5
(C) 6
(D) 3

Answer: (B) 5 · Key from source paper

Q243 JEE Main 2015 · 11 Apr · Online MCQ

Which of the following pairs of compounds are positional isomers?

Q43. Which of the following pairs of compounds are positional isomers?

(1) $CH_3—CH_2—CH_2—\underset{\underset{O}{\|}}{C}—CH_3$ and $CH_3—CH_2—\underset{\underset{O}{\|}}{C}—CH_2—CH_3$

(2) $CH_3—CH_2—CH_2—\underset{\underset{O}{\|}}{C}—CH_3$ and $CH_3—\underset{\underset{CH_3}{|}}{CH}—CH_2—CHO$

(3) $CH_3—CH_2—\underset{\underset{O}{\|}}{C}—CH_2—CH_3$ and $\begin{matrix}CH_3\\ \diagdown\\ \quad CH—CH_2—CHO\\ \diagup\\ CH_3\end{matrix}$

(4) $CH_3—CH_2—CH_2—CH_2—CHO$ and $CH_3—CH_2—CH_2—\overset{\overset{O}{\|}}{C}—CH_3$

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (A) · Key from source paper

Q244 JEE Main 2015 · 10 Apr · Online MCQ

The optically inactive compound from the following is:

(A) 2-chloropropanal
(B) 2-chloro-2-methylbutane
(C) 2-chlorobutane
(D) 2-chloropentane

Answer: (B) 2-chloro-2-methylbutane · Key from source paper

Q245 JEE Main 2015 · 4 Apr · Offline MCQ

Which of the following compounds will exhibit geometrical isomerism?

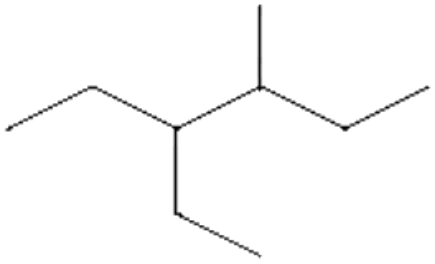
(A) 1, 1 - Diphenyl - 1 - propane
(B) 1 - Phenyl - 2 - butene
(C) 3 - Phenyl - 1 - butene
(D) 2 - Phenyl - 1 - butene

Answer: (B) 1 - Phenyl - 2 - butene · Key from source paper

Q246 JEE Main 2014 · 19 Apr · Online MCQ

see figure

Q42. The correct IUPAC name of the following compound



is :

(1) 4 - methyl - 3 - ethylhexane
(2) 3 - ethyl - 4 - methylhexane
(3) 4 - ethyl - 3 - methylhexane
(4) 3, 4 - ethylmethylhexane

(A) 4 - methyl - 3 - ethylhexane
(B) 3 - ethyl - 4 - methylhexane
(C) 4 - ethyl - 3 - methylhexane
(D) 3, 4 - ethylmethylhexane

Answer: (B) 3 - ethyl - 4 - methylhexane · Key from source paper

Q247 JEE Main 2014 · 12 Apr · Online MCQ

Which one of the following acids does not exhibit optical isomerism?

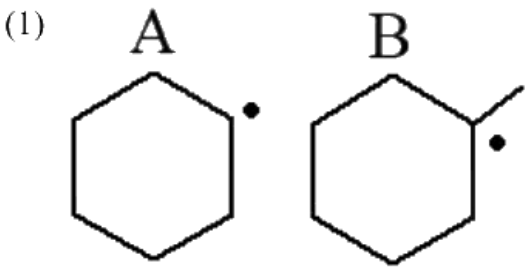
(A) Lactic acid
(B) Tartaric acid
(C) Maleic acid
(D) α-amino acids

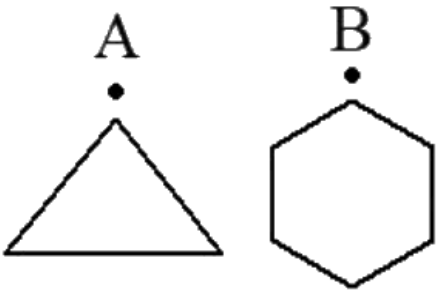
Answer: (C) Maleic acid · Key from source paper

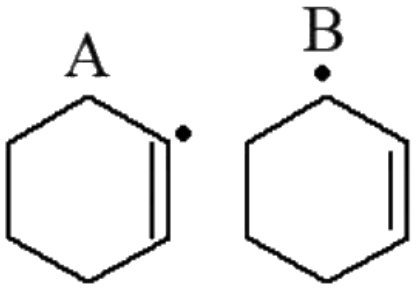
Q248 JEE Main 2014 · 9 Apr · Online MCQ

In which of the following pairs A is more stable than B?
(see the figure above)

Q41. In which of the following pairs A is more stable than B?

(1) 

(2) 

(3) 

(4) A B

$Ph_3C^{\bullet}$, $(CH_3)_3C^{\bullet}$

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · Key from source paper

Q249 JEE Main 2013 · 23 Apr · Online MCQ

Monocarboxylic acids are functional isomers of:

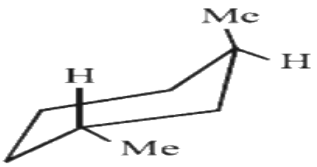
(A) Ethers
(B) Amines
(C) Esters
(D) Alcohols

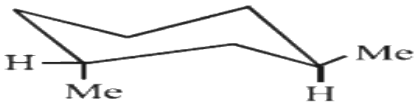
Answer: (C) Esters · Key from source paper

Q250 JEE Main 2013 · 22 Apr · Online MCQ

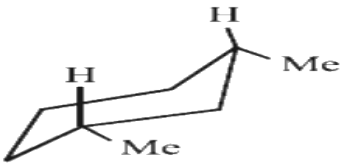
Arrange in the correct order of stability (decreasing order) for the following molecules: (I)
(see the figure above)

Q42. Arrange in the correct order of stability (decreasing order) for the following molecules: (I)





(II)



(III)



(IV)

(1) (I) > (II) > (III) > (IV)
(2) (IV) > (III) > (II) ≈ (I)
(3) (I) > (II) ≈ (III) > (IV)
(4) (III) > (I) ≈ (II) > (IV)

(A) (I) > (II) > (III) > (IV)

(B) (IV) > (III) > (II) ≈ (I)

(C) (I) > (II) ≈ (III) > (IV)

(D) (III) > (I) ≈ (II) > (IV)

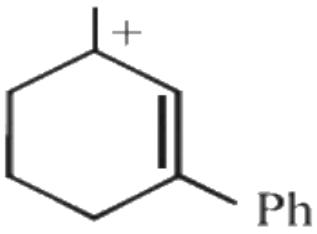
Answer: (D) (III) > (I) ≈ (II) > (IV) · Key from source paper

Q251 JEE Main 2013 · 9 Apr · Online MCQ

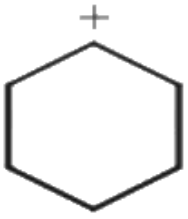
Which one of the following is most stable ?

Q41. Which one of the following is most stable ?

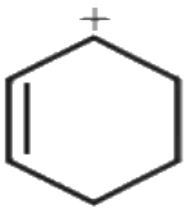
(1)



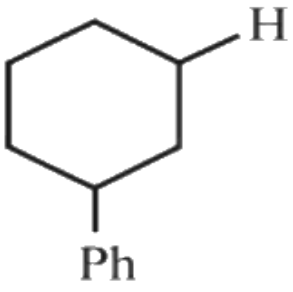
(2)



(3)



(4)



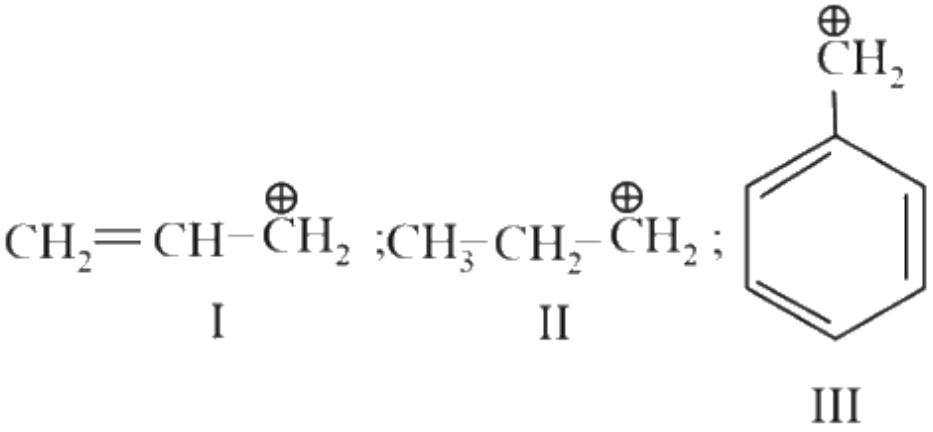
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (A) · Key from source paper

Q252 JEE Main 2013 · 7 Apr · Offline MCQ

The order of stability of the following carbocations:
(see the figure above)

Q46. The order of stability of the following carbocations:



(1) I > II > III
(2) III > I > II
(3) III > II > I
(4) II > III > I

(A) I > II > III
(B) III > I > II
(C) III > II > I
(D) II > III > I

Answer: (B) III > I > II · Key from source paper

Q253 AIEEE 2012 · 26 May · Online MCQ

Maleic acid and fumaric acids are

(A) Chain isomers
(B) Functional isomers
(C) Tautomers
(D) Geometrical isomers

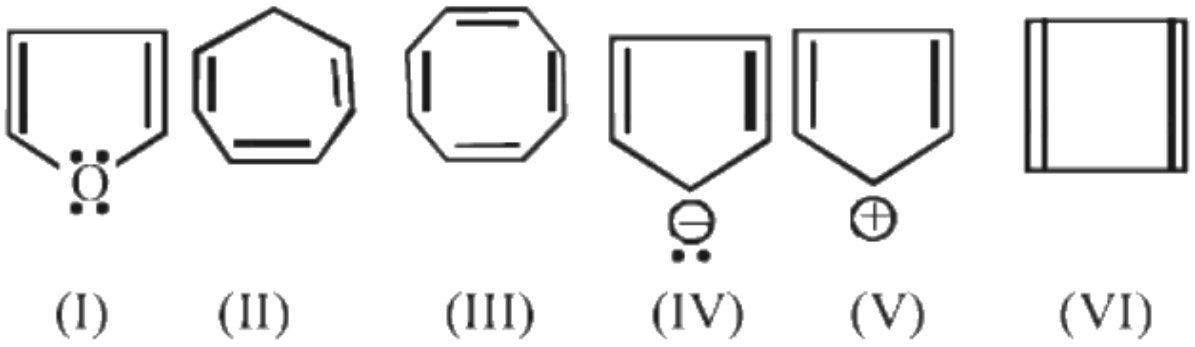
Answer: (D) Geometrical isomers · Key from source paper

Q254 AIEEE 2012 · 26 May · Online MCQ

Which of the following compounds are antiaromatic

(see the figure above)

Q43. Which of the following compounds are antiaromatic



(I) (II) (III) (IV) (V) (VI)

(1) (I) and (V)
(2) (II) and (V)
(3) (I) and (IV)
(4) (V) and (VI)

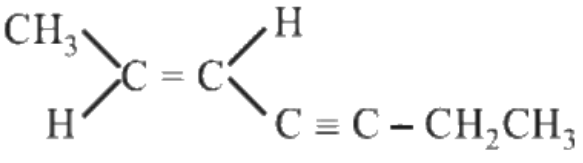
A (I) and (V)
B (II) and (V)
C (I) and (IV)
D (V) and (VI)

Answer: (D) (V) and (VI) · Key from source paper

Q255 AIEEE 2012 · 19 May · Online MCQ

see figure

Q44.



The IUPAC name of the following compound is

(1) (E)-2-hepten-4-yne
(2) (Z)-5-hepten-3-yne
(3) (E)-5-hepten-3-yne
(4) (Z)-2-hepten-4-yne

(A) (E)-2-hepten-4-yne
(B) (Z)-5-hepten-3-yne
(C) (E)-5-hepten-3-yne
(D) (Z)-2-hepten-4-yne

Answer: (A) (E)-2-hepten-4-yne · Key from source paper

Q256 AIEEE 2012 · 7 May · Online MCQ

Which of the following cannot be represented by resonance structures?

(A) Dimethyl ether
(B) Nitrate anion
(C) Carboxylate anion
(D) Toluene

Answer: (A) Dimethyl ether · Key from source paper

Q257 AIEEE 2012 · 7 May · Online MCQ

The IUPAC name of the compound *(see the figure above)* is

Q44. The IUPAC name of the compound < smiles>CC1CO1 < /smiles> is

(1) 1, 2-Propoxide (2) Propylene oxide
(3) 1,2-Oxo propane (4) 1, 2-Epoxy propane

(A) 1, 2-Propoxide
(B) Propylene oxide
(C) 1,2-Oxo propane
(D) 1, 2-Epoxy propane

Answer: (D) 1, 2-Epoxy propane · Key from source paper

Q258 AIEEE 2012 · 7 May · Online MCQ

How many cyclic structures are possible for C_4H_6 ?

(A) 3
(B) 5
(C) 6
(D) 4

Answer: (B) 5 · Key from source paper

Q259 AIEEE 2011 MCQ

Identify the compound that exhibits tautomerism.

(A) Lactic acid
(B) 2- Butene
(C) Phenol
(D) None of these

Answer: (C) Phenol · Key from source paper

Q260 AIEEE 2010 MCQ

The correct order of increasing basicity of the given conjugate bases ($R = CH_3$) is

(A) $RCO\overline{O} < HC \equiv \overline{C} < \overline{R} < \overline{N}H_2$
(B) $\overline{R} < HC \equiv \overline{C} < RCO\overline{O} < \overline{N}H_2$
(C) $RCO\overline{O} < \overline{N}H_2 < HC \equiv \overline{C} < \overline{R}$
(D) $RCO\overline{O} < HC \equiv \overline{C} < \overline{N}H_2 < \overline{R}$

Answer: (D) $RCO\overline{O} < HC \equiv \overline{C} < \overline{N}H_2 < \overline{R}$ · Key from source paper

Q261 AIEEE 2010 MCQ

Out of the following, the alkene that exhibits optical isomerism is

(A) 3-methyl-2-pentene
(B) 4-methyl-1-pentene
(C) 3-methyl-1-pentene
(D) 2-methyl-2-pentene

Answer: (C) 3-methyl-1-pentene · Key from source paper

Q262 AIEEE 2009 MCQ

Arrange the carbanions, $(CH_3)_3C$, CCl_3, $(CH_3)_2CH$, $C_6H_5CH_2$, in order of their decreasing stability :

(A) $C_6H_5\overline{C}H_2 > \overline{C}Cl_3 > (CH_3)_3\overline{C} > (CH_3)_2\overline{C}H$
(B) $(CH_3)_2\overline{C}H > \overline{C}Cl_3 > C_6H_5\overline{C}H_2 > (CH_3)_3\overline{C}$
(C) $\overline{C}Cl_3 > C_6H_5\overline{C}H_2 > (CH_3)_2\overline{C}H > (CH_3)_3\overline{C}$
(D) $(CH_3)_3\overline{C} > (CH_3)_2\overline{C}H > C_6H_5\overline{C}H_2 > \overline{C}Cl_3$

Answer: (C) $\overline{C}Cl_3 > C_6H_5\overline{C}H_2 > (CH_3)_2\overline{C}H > (CH_3)_3\overline{C}$ · Key from source paper

Q263 AIEEE 2009 MCQ

The alkene that exhibits geometrical isomerism is:

(A) propene
(B) 2-methyl propene
(C) 2-butene
(D) 2- methyl -2- butene

Answer: (C) 2-butene · Key from source paper

Q264 AIEEE 2009 MCQ

The number of stereoisomers possible for a compound of the molecular formula $CH_3 - CH = CH - CH(OH) - Me$ is :

(A) 3
(B) 2
(C) 4
(D) 6

Answer: (C) 4 · Key from source paper

Q265 AIEEE 2009 MCQ

The IUPAC name of neopentane is

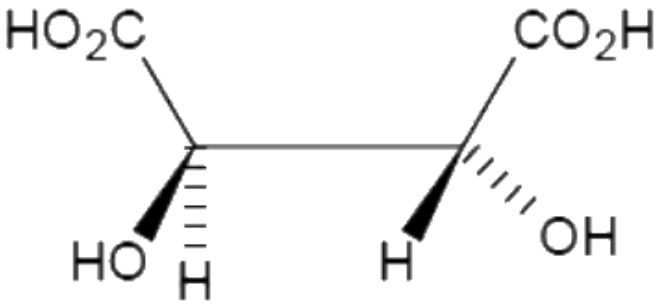
(A) 2-methylbutane
(B) 2, 2-dimethylpropane
(C) 2-methylpropane
(D) 2,2-dimethylbutane

Answer: (B) 2, 2-dimethylpropane · Key from source paper

Q266 AIEEE 2008 MCQ

The absolute configuration of *(see the figure above)* is

Q48.



The absolute configuration of

is

(1) S, S
(2) R, R
(3) R, S
(4) S, R

(A) S, S

(B) R, R

(C) R, S

(D) S, R

Answer: (B) R, R · Key from source paper

Q267 AIEEE 2008 MCQ

The correct decreasing order of priority for the functional groups of organic compounds in the IUPAC system of nomenclature is

(A) $-\mathrm{COOH}, -\mathrm{SO_3H}, -\mathrm{CONH_2}, -\mathrm{CHO}$

(B) $-\mathrm{SO_3H}, -\mathrm{COOH}, -\mathrm{CONH_2}, -\mathrm{CHO}$

(C) $-\mathrm{CHO}, -\mathrm{COOH}, -\mathrm{SO_3H}, -\mathrm{CONH_2}$

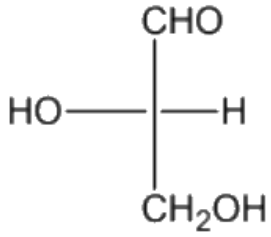
(D) $-\mathrm{CONH_2}, -\mathrm{CHO}, -\mathrm{SO_3H}, -\mathrm{COOH}$

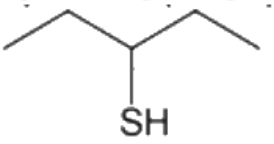
Answer: (A) $-\mathrm{COOH}, -\mathrm{SO_3H}, -\mathrm{CONH_2}, -\mathrm{CHO}$ · Checked by our team

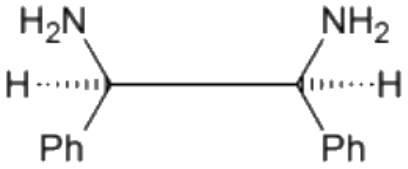
Q268 AIEEE 2007 MCQ

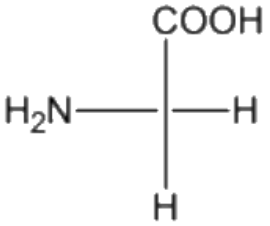
see figure

Q60. Which of the following molecules is expected to rotate the plane of plane polarized light?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (A) · Key from source paper

Q269 AIEEE 2007 MCQ

Which one of the following conformation of cyclohexane is chiral?

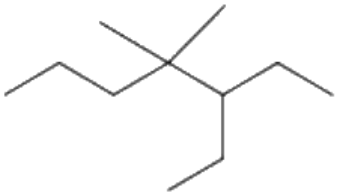
(A) Twist boat
(B) Rigid
(C) Chair
(D) Boat

Answer: (A) Twist boat · Key from source paper

Q270 AIEEE 2007 MCQ

see figure

Q62.



The IUPAC name of . . is

(1) 1, 1−diethyl−2, 2−dimethylpentane
(2) 4, 4−dimethyl−5, 5−diethylpentane
(3) 5, 5−diethyl−4, 4−diemthylpentane
(4) 3−ethyl−4, 4−dimethylheptane

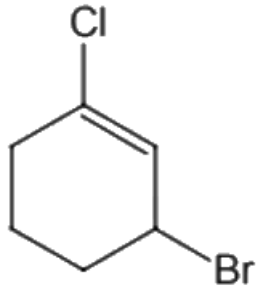
(A) 1, 1−diethyl−2, 2−dimethylpentane
(B) 4, 4−dimethyl−5, 5−diethylpentane
(C) 5, 5−diethyl−4, 4−diemthylpentane
(D) 3−ethyl−4, 4−dimethylheptane

Answer: (D) 3−ethyl−4, 4−dimethylheptane · Key from source paper

Q271 AIEEE 2006 MCQ

The IUPAC name of the compound shown below is
(see the figure above)

Q79. The IUPAC name of the compound shown below is



(1) 2-bromo-6-chlorocyclohex-1-ene
(2) 6-bromo-2-chlorocyclohexene
(3) 3-bromo-1-chlorocyclohexene
(4) 1-bromo-3-chlorocyclohexene

(A) 2-bromo-6-chlorocyclohex-1-ene
(B) 6-bromo-2-chlorocyclohexene
(C) 3-bromo-1-chlorocyclohexene
(D) 1-bromo-3-chlorocyclohexene

Answer: (C) 3-bromo-1-chlorocyclohexene · Key from source paper

Q272 AIEEE 2006 MCQ

The increasing order of stability of the following free radicals is

(A) $(CH_3)_2\dot{C}H < (CH_3)_3\dot{C} < (C_6H_5)_2\dot{C}H < (C_6H_5)_3\dot{C}$
(B) $(C_6H_5)_3\dot{C} < (C_6H_5)_2\dot{C}H < (CH_3)_3\dot{C} < (CH_3)_2\dot{C}H$
(C) $(C_6H_5)_2\dot{C}H < (C_6H_5)_3\dot{C} < (CH_3)_3\dot{C} < (CH_3)_2\dot{C}H$
(D) $(CH_3)_2\dot{C}H < (CH_3)_3\dot{C} < (C_6H_5)_3\dot{C} < (C_6H_5)_2\dot{C}H$

Answer: (A) $(CH_3)_2\dot{C}H < (CH_3)_3\dot{C} < (C_6H_5)_2\dot{C}H < (C_6H_5)_3\dot{C}$ · Key from source paper

Q273 AIEEE 2006 MCQ

Increasing order of stability among the three main conformations (i.e. Eclipse, Anti, Gauche) of 2-fluoroethanol is

(A) Eclipse, Gauche, Anti
(B) Gauche, Eclipse, Anti
(C) Eclipse, Anti, Gauche
(D) Anti, Gauche, Eclipse

Answer: (C) Eclipse, Anti, Gauche · Key from source paper

Q274 AIEEE 2005 MCQ

Due to the presence of an unpaired electron, free radicals are:

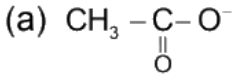
(A) Chemically reactive
(B) Chemically inactive
(C) Anions
(D) Cations

Answer: (A) Chemically reactive · Key from source paper

Q275 AIEEE 2005 MCQ

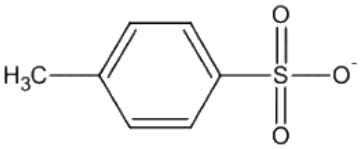
see figure

Q112.

(a) 

(b) CH_3O^-

(c) CN^-

(d) 

The decreasing order of nucleophilicity among the nucleophiles

(1) (a), (b), (c), (d)

(2) (d), (c), (b), (a)

(3) (b), (c), (a), (d)

(4) (c), (b), (a), (d)

(A) (a), (b), (c), (d)

(B) (d), (c), (b), (a)

(C) (b), (c), (a), (d)

(D) (c), (b), (a), (d)

Answer: (D) (c), (b), (a), (d) · Key from source paper

Q276 AIEEE 2005 MCQ

Which types of isomerism is shown by 2,3-dichlorobutane?

(A) Diastereo

(B) Optical

(C) Geometric

(D) Structural

Answer: (B) Optical · Key from source paper

Q277 AIEEE 2004 MCQ

For which of the following parameters the structural isomers C_2H_5OH and CH_3OCH_3 would be expected to have the same values? (Assume ideal behaviour)

(A) Heat of vaporization

(B) Gaseous densities at the same temperature and pressure

(C) Boiling points

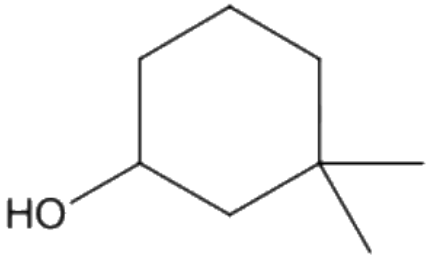
(D) Vapour pressure at the same temperature

Answer: (B) Gaseous densities at the same temperature and pressure · Key from source paper

Q278 AIEEE 2004 MCQ

see figure

Q111.



The IUPAC name of the compound

(1) 3, 3- dimethyl -1- hydroxy cyclohexane

(2) 1,1-dimethyl -3- cyclohexanol

(3) 3,3- dimethyl -1- cyclohexanol

(4) 1,1 - dimethyl -3- hydroxy cyclohexane

(A) 3, 3- dimethyl -1- hydroxy cyclohexane

(B) 1,1-dimethyl -3- cyclohexanol

(C) 3,3- dimethyl -1- cyclohexanol

(D) 1,1 - dimethyl -3- hydroxy cyclohexane

Answer: (C) 3,3- dimethyl -1- cyclohexanol · Key from source paper

Q279 AIEEE 2004 MCQ

Which of the following will have meso-isomer also?

(A) 2- chlorobutane

(B) 2- hydroxyopanoic acid

(C) 2,3 - dichloropentane

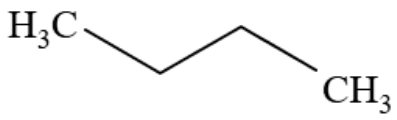
(D) 2-3- dichlorobutane

Answer: (D) 2-3- dichlorobutane · Key from source paper

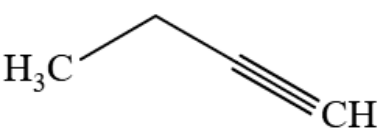
Q280 AIEEE 2004 MCQ

Amongst the following compound, the optically active alkane having lowest molecular mass is

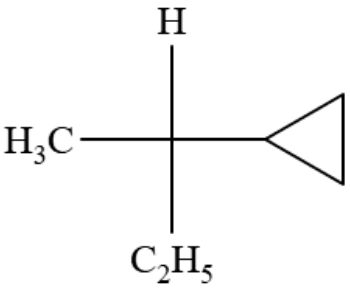
(1)



(2)



(3)



(4)

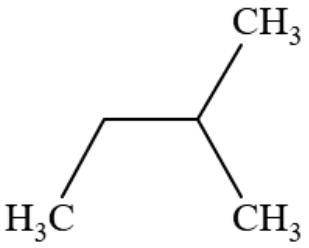


Figure redrawn by EdLoop

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q281 AIEEE 2004 MCQ

Which of the following compound is not chiral?

(A) 1- chloropentane
(B) 3-chloro-2- methyl pentane
(C) 1-chloro -2- methyl pentane
(D) 2- chloropentane

Answer: (A) 1- chloropentane · Key from source paper

Q282 AIEEE 2003 MCQ

The IUPAC name of $CH_3COCH(CH_3)_2$ is

(A) 2-methyl-3-butanone
(B) 4-methylisopropyl ketone
(C) 3-methyl-2-butanone
(D) Isopropylmethyl ketone

Answer: (C) 3-methyl-2-butanone · Key from source paper

Q283 AIEEE 2003 MCQ

The general formula $C_nH_{2n}O_2$ could be for open chain

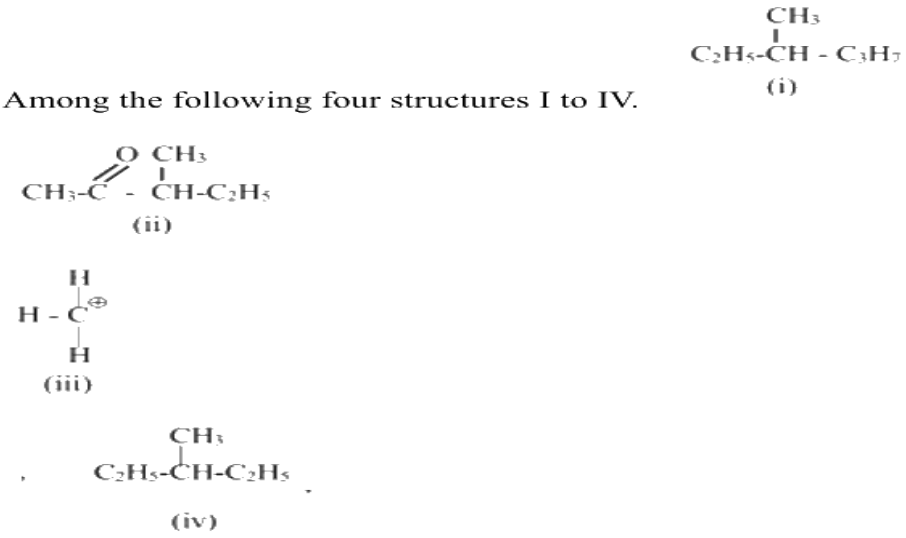
(A) carboxylic acids
(B) diols
(C) dialdehydes
(D) deketones

Answer: (A) carboxylic acids · Key from source paper

Q284 AIEEE 2003 MCQ

Among the following four structures I to IV.
(see the figure above)
It is true that

Q114.



(A) only I and II are chiral compounds
(B) only III i a chiral compound
(C) only II and IV are chiral compounds
(D) all four are chiral compounds

Answer: (A) only I and II are chiral compounds · Key from source paper

Q285 AIEEE 2002 MCQ

Arrangement of $(CH_3)_3-C-$, $(CH_3)_2-CH-$, CH_3-CH_2 - when attached to benzyl or an unsaturated group in increasing order of inductive effect is

(A) $(CH_3)_3 - C- < (CH_3)_2 - CH- < CH_3 - CH_2$

(B) $CH_3 - CH_2- < (CH_3)_2- < CH- < (CH_3)_3 - C-$

(C) $(CH_3)_2 - CH- < (CH_3)_3 - C- < CH_3, -CH_2$

(D) $(CH_3)_3 - C- < CH_3 - CH_2 - (CH_3)_2 - CH-$

Answer: (B) $CH_3 - CH_2- < (CH_3)_2- < CH- < (CH_3)_3 - C-$ · Key from source paper

Q286 AIEEE 2002 MCQ

A similarity between optical and geometrical isomerism is that

(A) each forms equal number of isomers for a given compound

(B) If in a compound one is present then so is the other

(C) both are included in stereoisomerism

(D) they have no similarity

Answer: (C) both are included in stereoisomerism · Key from source paper

Q287 AIEEE 2002 MCQ

Which of the following does not show geometrical isomerism?

(A) 1, 2-dichloro - 1- pentene

(B) 1, 3 - dichloro - 2- pentene

(C) 1, 1- dichloro - 1- pentene

(D) 1, 4 - dichloro - 2- pentene

Answer: (C) 1, 1- dichloro - 1- pentene · Key from source paper

Q288 AIEEE 2002 MCQ

Which of the following compounds has wrong IUPAC name ?

(A) $CH_3 - CH_2 - CH_2 - COO - CH_2CH_3 \longrightarrow$ ethyl butanoate

(B) $CH_3 - CH - CH_2 - CHO \longrightarrow$ 3-methyl-butanal (a "CH" is printed below the second carbon)

(C) $CH_3 - CH - CH - CH_3 \longrightarrow$ 2 - methyl-3-butanol (OH is printed below the first CH, CH_3 below the second CH)

(D) $CH_3 - CH - C - CH_2 - CH_3 \longrightarrow$ 2-methyl-3-pentanone (C=O: O printed above the C; CH_3 printed below the CH)

Answer: (C) $CH_3 - CH - CH - CH_3 \longrightarrow$ **2 - methyl-3-butanol (OH is printed below the first CH,** CH_3 **below the second CH)** · Key from source paper

Q289 AIEEE 2002 MCQ

Racemic mixture is formed by mixing two

(A) isomeric compounds
(B) chiral compounds
(C) meso compounds
(D) optical isomers

Answer: (D) optical isomers · Key from source paper

EdLoop JEE