

JEE MAIN ISOMERISM — PYQS

Max. Marks: 56

Questions: 14

Section A (MCQ) — 11 questions

Q.1 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 :

[JEE Main 2026 (Online) 6th April Morning Shift]

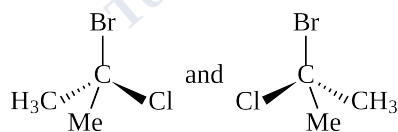
- (1) Both Statement-I and Statement-II are true
 (2) Both Statement-I and Statement-II are false
 (3) Statement-I is true but Statement-II is false
 (4) Statement-I is false but Statement-II is true

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Q.2 The following structures are :

[JEE Main 2026 (Online) 4th April Evening Shift]



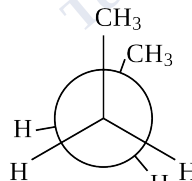
- (1) enantiomers. (2) identical molecules.
 (3) diastereomers. (4) meso compounds.

Scan or tap for the full solution

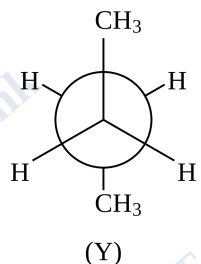


Q.3 Given below are two statements :

Statement-I: There are several conformers for n-

butane. Out of those conformers,  (X)

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

[JEE Main 2026 (Online) 24th January Evening Shift]

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

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Q.4 Identify **correct** statements from the following :

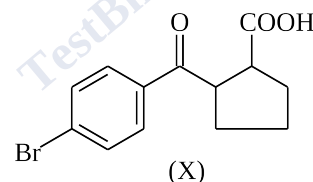
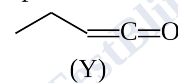
- A. Propanal and propanone are functional isomers.
 B. Ethoxyethane and methoxypropane are metamers.
 C. But-2-ene shows optical isomerism.
 D. But-1-ene and but-2-ene are functional isomers.
 E. Pentane and 2,2-dimethylpropane are chain isomers.

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

[JEE Main 2026 (Online) 21st January Morning Shift]

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

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Q.5 **Statement-I:** Compound (X), shown below, dissolves in NaHCO_3 solution and has two chiral carbon atoms**Statement-II:** Compound (Y), shown below, has two carbons with sp^3 hybridization, one carbon with sp^2 and one carbon with sp hybridizationIn the light of the above statements, choose the **correct** answer from the options given below :

[JEE Main 2026 (Online) 21st January Evening Shift]

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

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Q.6 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 :

[JEE Main 2026 (Online) 21st January Evening Shift]

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

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Q.7 Given below are four compounds :

- (a) n-propyl chloride (b) isopropyl chloride
 (c) sec-butyl chloride (d) neopentyl chloride

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

[JEE Main 2026 (Online) 21st January Evening Shift]

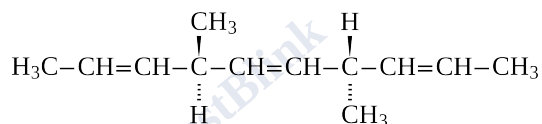
- (1) 46 (2) 40 (3) 52 (4) 56

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Q.8 The number of optically active products obtained from the complete ozonolysis of the given compound is :

[JEE Main 2025 (Online) 7th April Evening Shift]

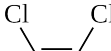


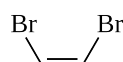
- (1) 4 (2) 0 (3) 2 (4) 1

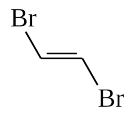
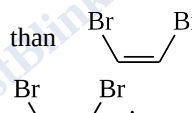
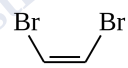
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Q.9 Given below are two statements :

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 :

[JEE Main 2025 (Online) 7th April Evening Shift]

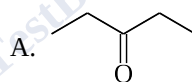
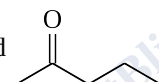
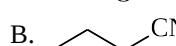
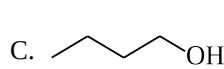
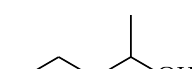
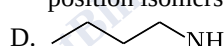
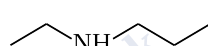
- (1) Both Statement-I and Statement-II are correct
 (2) Statement-I is incorrect but Statement-II is correct
 (3) Both Statement-I and Statement-II are incorrect
 (4) Statement-I is correct but Statement-II is incorrect

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Q.10 Identify the correct statements from the following.

Choose the correct answer from the options given below:

- A.  and  are metamers
 B.  and  are functional isomers
 C.  and  are position isomers
 D.  and  are homologous

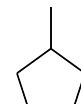
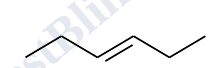
[JEE Main 2025 (Online) 3rd April Morning Shift]

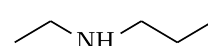
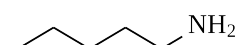
- (1) B & C Only (2) C & D Only
 (3) A, B & C Only (4) A & B Only

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Q.11 Given below are two statements:

Statement-I:  and  are isomeric compounds.

Statement-II:  and  are functional group isomers.

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

[JEE Main 2025 (Online) 28th January Evening Shift]

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

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full solution



Section B (Numerical) — 3 questions

Q.12 Consider the isomers of hydrocarbon with molecular formula C_5H_{10} . These isomers do not decolourise $KMnO_4$ solution. These isomers are subjected to chlorination with chlorine in presence of light to give monochloro compounds. The total number of monochloro compounds (structural isomers only) formed is _____.

[JEE Main 2026 (Online) 2nd April Morning Shift]

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Q.13 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 _____.

[JEE Main 2026 (Online) 23rd January Morning Shift]

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Q.14 The total number of structural isomers possible for the substituted benzene derivatives with the molecular formula C_9H_{12} is _____.

[JEE Main 2025 (Online) 3rd April Evening Shift]

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ANSWER KEY

Section A (MCQ) — 11 questions

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	3	2	4	1	2	1	3	2	4	4	2

Section B (Numerical) — 3 questions

Ques.	12	13	14								
Ans.	14	3	8								