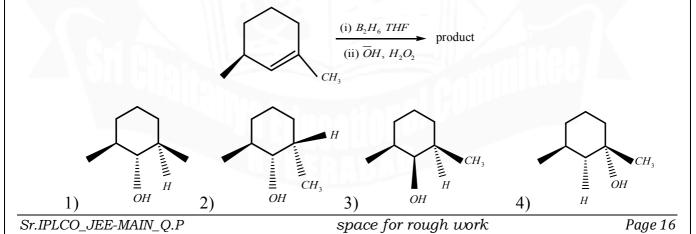
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08-08-15_Sr.IPLC 0	D_JEE-Main_RPTM-2_ Syllab	ous
Mathematics:		
PARABOLA AND CIRCLES		
Physics:		
N L M and Friction(Circular motion exclud	ded)	
Chemistry:		
ALKANES, ALKENES and ALKYNES		
Preparation, properties and reactions of Alkan	es, Alkenes, Alkynes and Dienes	
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CHEMISTRY

31. Which of the following reaction is expected to give a fairly good yield of $(CH_3)_3 C \longrightarrow CH \Longrightarrow CH_2$?

$$H_{3}C \longrightarrow CH_{3} \longrightarrow C$$

32. Which of the product is obtained in the following reaction:



33. Reactivity order of alkenes towards electrophilic addition reaction

$$CH_2 = CH - OCH_3 \quad CH_2 = CH - NO_2 \quad CH_2 = CH - CH_3 \quad CH_2 = CH - C\ell$$

$$II \qquad III \qquad IV$$

1)
$$III > I > IV > II$$
 2) $I > III > IV > II$ 3) $I > II > III > IV$ 4) $III > I > II > IV$

34. The reaction sequence

$$H_{3}C \xrightarrow{C} C - CH = CH_{2} \xrightarrow{CH_{3}CO_{3}H}$$

$$H_{3}C \xrightarrow{C_{2}H_{5}}$$

will yield

- 1) A pair of products that are enantiomers
- 2) A single product that is optically active
- 3) A pair of products that are diastereomers
- 4) A Meso compound
- 35. The Major product of the following reaction is

$$H_{3}C''_{M} \xrightarrow{D} D$$

$$H_{3}C \xrightarrow{D} D$$

$$H_{3}C \xrightarrow{D} D$$

$$2)$$

 H_3C

4) Both A&B in almost equal proportions

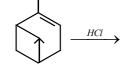
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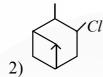
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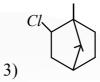
36.



product (Major)





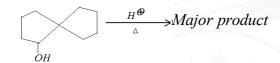




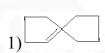
37. $CH = CH \xrightarrow{Chromic\ Acid} A \xrightarrow{NaOH} B \xrightarrow{Koble's} C \xrightarrow{450^{\circ}C} D$. Regarding 'D' the wrong

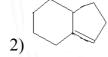
statement is

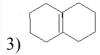
- 1)Hybridization of carbons is 🔊
- 2)It is useful for the preparation of mustard gas
- 3)It gives Baeyer's test
- 4)It mainly participates in substitution reactions

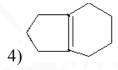


38.









- 39. A chiral compound, C_5H_8 , upon simple catalytic hydrogenation, yields an achiral compound, C_5H_{10} . What is the best name for the former?
 - 1) 1–Methylcyclobutene
- 2) 3-Methylcyclobutene
- 3) 1,2-dim*ethylcyclopropene*
- 4) cyclopentene

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40. Which is incorrect product?

$$CH_3 - C \equiv C - CH_3 \xrightarrow{Na/liq.NH_3} CH_3 = C \xrightarrow{CH_3} H$$
1)

$$CH_3 - C \equiv C - CH_3 \xrightarrow{H_2 \atop Pd/BaSO_4} \overset{\text{CH}_3}{\underset{\text{H}}{\sim}} C = C \xrightarrow{\text{CH}_3}$$

$$H$$
 CH_3
 Br_2
 H
 Br
 Br
 CH_3
 H
 Br
 CH_3
 H
 Br
 CH_3

41.

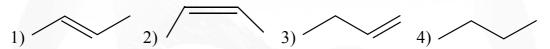
$$\begin{array}{c|c}
 & H \\
 & N \\
\hline
 & & Br_2 \\
\hline
 & & X,
\end{array}$$

X is

42.
$$CH_3 - CH_3 - CH_2 - CH_3 - CH_$$

1) H_2O/H_2SO_4

- 2) Hg(OAC), followed by NaBH₄
- 3) BH₃ followed by H₂O₂ / NaOH 4) All of these
- $CH_3 C \equiv C CH_3 \xrightarrow{i)} \frac{B_2H_6}{ii)} CH_3CO_2H$. Major product formed in the above reaction is 43.

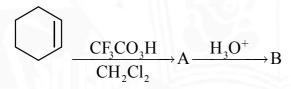


But -2 – yne is subjected to the following sequence of reactions 44.

$$CH_{3} - C \equiv C - CH_{3} \xrightarrow{Br_{2}(1 \text{ mol})} A \xrightarrow{Cl_{2}(1 \text{ mol})} B$$

If both the steps involve anti-addition, the final product 'B' is

- 1) (\pm) CH₃ CBrCl CBrCl CH₃ 2) Meso CH₃C Br Cl CBrClCH₃
- 3) trans $-ClCH_2CBr = CBrCH_2Cl$ 4) $CH_3CBr_2CCl_2CH_3$
- Consider the following sequence of reactions 45.



The final product 'B' is

- 1) (\pm) trans cyclo hexane 1, 2 diol
- 2) (\pm) cis cyclo hexane 1, 2 diol
- 3) Epoxy cyclo hexane
- 4) Cyclo hexanol

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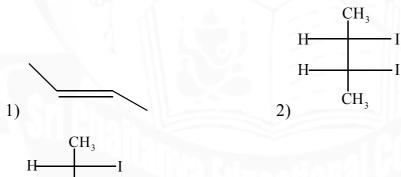
46. $CH_3 - \overset{C}{\overset{}{C}} - CH_2 - CH_2 - \overset{}{\overset{}{C}} H_3 + Cl_2 \xrightarrow{\Delta} \text{Major product formed is } CH_3$

47.

$$\begin{array}{c|c} CH_3 \\ H & B r \\ \hline B r & acetone \end{array} P.$$

$$CH_3$$

'P' is



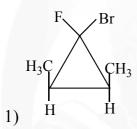
3) CH₃

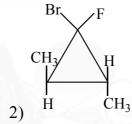
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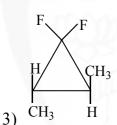
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- 48. t-butyl chloride $\xrightarrow{\text{CuI}} A \xrightarrow{\text{n-pentyl bromide}} B$. Compound 'B' is
 - 1) 2-methyl heptane

- 2) 2-methyl hexane
- 3) 2, 2-dimethyl heptane
- 4) 2, 2-dimethyl hexane
- 49. $CHF_2Br \xrightarrow{Alc.OH^{(-)}} A \xrightarrow{trans-2-butene} B$, 'B' is







- 4) An open chain compounds
- 50. $CH_3 C \equiv CH \longrightarrow CH_3 C \equiv C CH_3$

Above conversion can be achieved by

1) $NaNH_2$, $CH_3 - I$

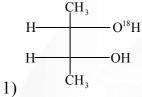
2) NaH, CH₃ – I

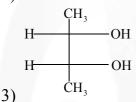
3) Na, $CH_3 - I$

4) All

$$\frac{O}{(i)CH_3 - C - O - O^{18} - H} 'X'$$
51.

The probable structure of 'X' is

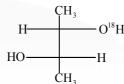




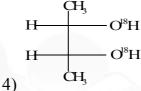
O-xylene on ozonolysis will give 52.

1) CHO and $CH_3 - C - CHO$ 2) $H_3C - C = O \& CH_3 - C - CHO$

3) $H_3C - C = O$ & CHO



2)



 $CH_3-C=O$

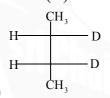
$$CH_3-C=C$$

 $CH_3-C=O$ O

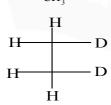
4) $H_3C - C = O$, $CH_3 - C - CHO & CHO$

53.
$$CH_3 - C \equiv C - CH_3 \xrightarrow{H_2} (A) \xrightarrow{D_2} (B)$$

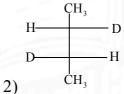
Product (B) of above reaction is

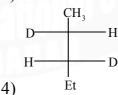


1)



3)





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CHO

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54.

56.

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CH₂ –CCCH

COOH

 $CH_3 - C \equiv C - H \xrightarrow{\text{NaH}} (X) \xrightarrow{C} (Y) \xrightarrow{O_3} (Z)$

Final products (Z) of reaction are?

55.
$$\frac{H_2SO_4}{\Delta} \rightarrow P(Major) \xrightarrow{NBS} Q(Major).$$
 The structure of 'Q' is

$$\begin{array}{c|c}
Br \\
Br \\
Br \\
Br \\
Br \\
3)
\end{array}$$

$$\begin{array}{c|c}
Br \\
4)
\end{array}$$

$$\begin{array}{c|c} \hline & COOCH_3 \\ \hline & O_8O_4(leq) \\ \hline & H_2O / Acetone \end{array} X., \text{ Identify 'X'}$$

4) Reaction will not occur

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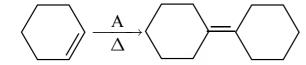
3)

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57.



'A' can be

- 1) Conc. H₂SO₄
- 2) alcoholic KOH 3) Et₃N 4) t-BuOK

58.

 $CH_{3}CH_{2}C \equiv CH \xrightarrow{\qquad NaNH_{2} / NH_{3} \left(liq\right) \qquad CH_{3}CH_{2}Br \qquad Li / NH_{3} \left(liq\right)}$

- 1) CH₃CH₂CH=CHCH₃
- 2) $CH_3CH_2CH = CH_2$

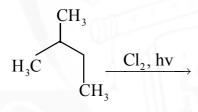
$$CH_3CH_2$$
 $C=C$
 CH_2CH_3

$$CH_3CH_2$$
 $C = C$
 H

- Propyne and propene can be distinguished by 59.
 - 1) conc. H₂SO₄

- 2) Br₂ in CCl₄ 3) dil. KMnO₄ 4) AgNO₃ in ammonia

60.



N(isomeric products) C₅H₁₁Cl fractional distillation

M (isomeric products). What are N and M?

- 1) 6, 6
- 2) 6, 4
- 3) 4, 4
- 4) 3, 3

Sr.IPLCO_JEE-MAIN_Q.P

space for rough work