CHEMISTRY

JEE MAIN AND ADVANCED

MOCK TEST 32

Example

1. Total number of isomeric products(excluding stereoisomers) formed on monochlorination of 2-methylbutane are

A. 3

B. 4

C. 5

D. 2

Answer: B

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2. Total number of conformational isomers obtained by C-C bond rotation of ethane are

A. 2

B. 4

C. 5

D. Infinite

Answer: D

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3. The catalyst used for converting methane to methanol in presence of air at 100 atm and 523 K is

A. Mo_2O_3

B. Ni

C. Cu

D. Zn

Answer: C

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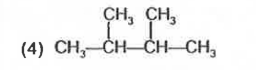
4. Which alkane cannot be be produced using only one type of alkyl halide in Wurtz reaction?

A. $CH_3 - CH_3$

B. $Ch_3CH_2CH_2CH_3$

C. $CH_3CH_2CH_2CH_2CH_3$

D. 

Answer: C

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5. Which alkane will be formed as major product on electrolysis aqueous solution of sodium propanoate?

A. CH_4

B. CH_3CH_3

C. $CH_3CH_2CH_2CH_3$

D. $CH_3CH_2CH_3$

Answer: C

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6. The compound which gives propane on reduction with Zn and dilute hydrochloric acid is

A. $CH_3CH_2CH_2OH$

B. $CH_3CH = CH_2$

C. $CH - C \equiv CH$

D. $CH_3CH_2CH_2 - Cl$

Answer: D

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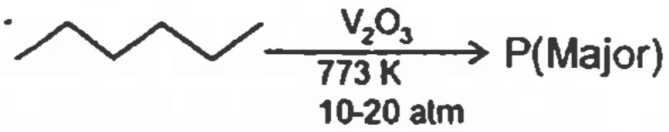
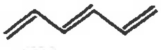
7. Which among the following is the major product (p) of the given reaction



A. (1) 

B. 

C. (3) 

D. 

Answer: C

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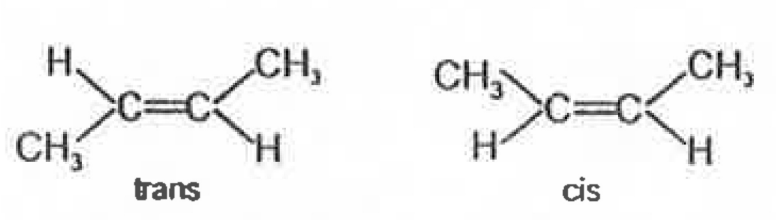
8. Consider the two geometrical isomers of but-2-ene



The isomer with higher melting point and the reason for the same is respetively

A. Cis, symmetric bonding

B. Trans, close and symmetric packing

C. Cis, close packing

D. Trans, non- symmetric arrangement of similar groups around C=C

Answer: B

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9. An alkane, A on ozonolysis gives two products propanal and propanone. Which of the given statements is incorrect for A?

A. Compound A is pent-2-ene

B. Compound A on hydrogenation gives 2-methyl pentane

C. Compound A can undergo bromination reaction

D. Compound a forms 2-bromo, 2-methylpentane on treating with HBr

Answer: A

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10. Birch reduction is done in the presence of

A. Palladium supported over charcoal

B. $Na/liq.\ NH_3$

C. $H_2\ /Nickel$

D. $Alc.\ KOH$

Answer: B

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11. A compound 'X', molecular formula $C_4H_8Br_2$ on treatment with zinc in an alcoholic solution, forms an alkene Y. Compounds X and Y respectively are

A. 1, 2-dibromobutane and but-2-ene

B. 1, 3-dibromobutane and but-1-ene

C. 1, 2-dibromobutane and but-1-ene

D. 1, 4-dibromobutane and but-2-ene

Answer: C

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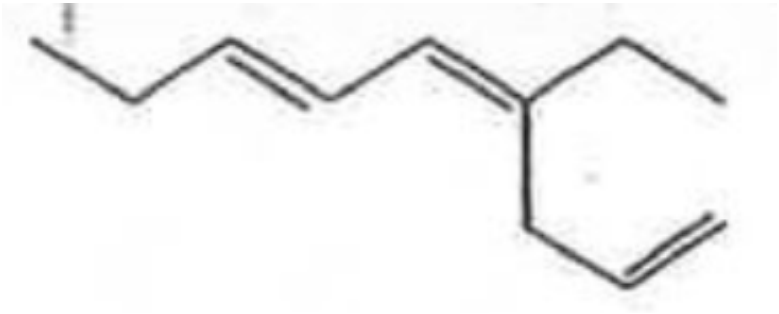
12. The IUPAC name of the given compound is



Compound is

A. 4-ethyl-1, 4, 6-nonatriene

B. 6-ethyl-3, 6, 8-nonatriene

C. 4-ethyl-1, 4, 6-dectraine

D. 6-ethyl-3, 6, 8-dectriene

Answer: A

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13. The total number of sigma bonds formed by $sp^2 - sp^2$ overlapping in 1, 3-butadiene is

A. 5

B. 2

C. 3

D. 4

Answer: C

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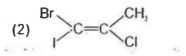
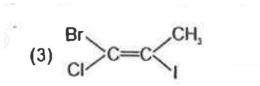
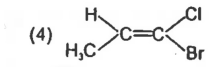
14. Which of the following represents an E isomer?

A. 

B. 

C. 

D. 

Answer: C

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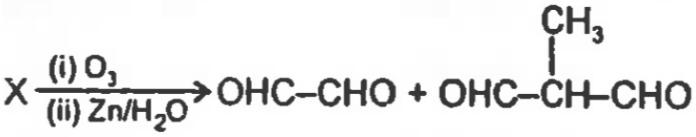
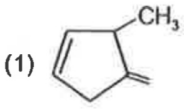
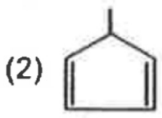
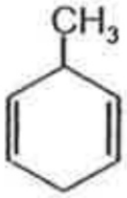
15. Consider the following reaction



The compound X is

A. (1) 

B. (2) 

(3) 

C.

(4) 

D.

Answer: B

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16. Which of the given statements is incorrect?

A. Peroxide effect proceeds via free radical chain mechanism

B. Peroxide effect is not observed in case of HCI

C. Tertiary carbocation is less stable than secondary carbocation

D. Kharasch effect is applicable for unsymmetrical alkenes

Answer: C

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17. Hydration of which of the given compounds leads to the formation of 2-methylpropan-2-ol?

A. 2-methylpropane

B. 1-bromopropane

C. 2-methylpropene

D. Propene

Answer: C

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