PRE-MEDICAL

ORGANIC CHEMISTRY

ENTHUSIAST | LEADER | ACHIEVER

EXERCISE

Hydrocarbons

ENGLISH MEDIUM

EXERCISE-I (Conceptual Questions) — Build Up Your Understanding

ALKANES

1. The order of reactivity of alkyl halides in Wurtz reaction is

(1) R–I > R–Br > R–Cl (2) R–I < R–Br < R–Cl

(3) R–Br > R–I < R–Cl (4) R–I > R–Cl > R–Br

HC0001

2. Kolbe's electrolysis of a mixture of pot. Propanoate and pot. 3-Methylbutanoate gives

(1) Butane and isobutane

(2) Butane and 2,5–dimethylhexane

(3) Butane, 2,5-dimethylhexane and isohexane

(4) Butane and isohexane

HC0002

3. The Corey-House alkane synthesis is carried out by treating an alkyl halide with

(1) Lithium metal

(2) Copper metal

(3) Lithium metal followed by reaction with cuprous iodide and then treating the product with an alkyl halide

(4) Cuprous iodide followed by reaction with alkyl halide

HC0003

4. Which of the following compound is not suitable to obtain from wurtz reaction ?

(1) ethane (2) butane

(3) isobutane (4) hexane

HC0005

5. When ethyl chloride and n-propyl chloride undergoes wurtz reaction which is not obtained

(1) n-butane (2) n-pentane

(3) n-hexane (4) isobutane

HC0006

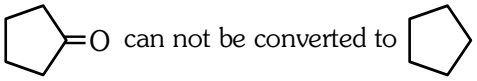
6. $CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH}}-MgCl + CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-OH \longrightarrow$ 'Q';

What is 'Q' ?

(1) isobutane (2) isopropane

(3) tert. butyl chloride (4) propane

HC0009

7.  can not be converted to by :

(1) Red P + HI

(2) Wollf Kishner reduction

(3) Clemmensen reaction

(4) $LiAlH_4$

HC0010

8. Which of the following reactions does not involve a C–C bond formation

(1) Hydrolysis of a Grignard reagent

(2) Combination of two alkyl free radicals

(3) Corey-House synthesis of alkanes

(4) $RNa + R-Br \longrightarrow R-R + NaBr$

HC0012

9. Which of the following reactions of methane is incomplete combustion :-

(1) $2CH_4 + O_2 \xrightarrow{Cu/523K/100atm.} 2CH_3OH$

(2) $CH_4 + O_2 \xrightarrow{Mo_2O_3} HCHO + H_2O$

(3) $CH_4 + O_2 \longrightarrow C(s) + 2H_2O(\ell)$

(4) $CH_4 + 2O_2 \longrightarrow CO_2(g) + 2H_2O(\ell)$

HC0016

10. Which is correct about Wurtz reaction ?

(a) It can proceed through free radical mechanism

(b) Alkanes having even no. of C-atom can be prepared

(c) Sodium in Ammonia is used

(d) Sodium in dry ether is used

(1) c, d (2) a, b, d

(3) b,c (4) a, b, c, d

HC0072

11. $C_2H_5-Cl \xrightarrow[H_2]{Zn,} (A)$

$(A) \xrightarrow[\text{Dry ether}]{Na} (B) \xleftarrow{H_2/Pt} (C) \text{ or } (D)$

The incorrect statement is :

(1) (A) is C_2H_6 (2) (C) can be 1-butene

(3) (A) and (B) are alkane (4) (D) is ethene

HC0073

12. Arrange the following in their boiling points.

(i) n-butane (ii) iso-butane

(iii) n-pentane (iv) iso-pentane

(v) neopentane

(1) iii > i > ii > iv > v (2) v > iv > ii > i > iii

(3) iii > iv > v > i > ii (4) ii > i > v > iv > iii

HC0074

13. For $CH_3-\overset{\overset{O}{\|}}{C}-ONa \xrightarrow{\text{Electrolysis}}$ (A) alkane

Which is incorrect ?
(1) A is ethane
(2) (A) is formed at anode
(3) CO_2 evolves at cathode
(4) pH near cathode increases during the process

HC0075

ALKENE

14. Ozonolysis of 3–Methyl–1–butene gives a mixture of
(1) Propanal and ethanal
(2) Propanone and ethanal
(3) 2–Methylpropanal and methanal
(4) Butanone and methanal

HC0017

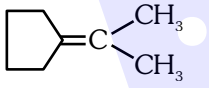
15. Oxidation of isobutylene with acidic potassium permanganate gives
(1) Acetone + CO_2 (2) Acetic acid
(3) Acetic acid + CO_2 (4) Acetic acid + acetone

HC0019

16. $CH_3CH_2CH_2Br \xrightarrow[\Delta]{\text{alc. KOH}} A \xrightarrow[\text{(ii) Zn, } H_2O]{\text{(i) } O_3} B + C$

In the above reaction A, B and C are given by the set
(1) Propylene, acetone, formaldehyde
(2) Propene, ethanal, methanal
(3) Propyne, acetaldehyde, formaldehyde
(4) Propylene, propionaldehyde, formaldehyde

HC0021

17. Which of the following alkenes on ozonolysis give a mixture of ketones only?
(a) $CH_3-CH=CH-CH_3$
(b) $CH_3-\underset{\underset{CH_3}{|}}{CH}-CH=CH_2$
(c) 
(d) $(CH_3)_2C=C\begin{matrix}CH_3\\CH_3\end{matrix}$

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

HC0025

18. Which reaction will not happen at room temperature:
(1) $CH_2=CH_2 \xrightarrow{H_2/Pt} CH_3-CH_3$
(2) $CH_2=CH_2 \xrightarrow{H_2/Pd} CH_3-CH_3$
(3) $CH_2=CH_2 \xrightarrow{H_2/Ni} CH_3-CH_3$
(4) $CH\equiv CH \xrightarrow{H_2/Pt} CH_3-CH_3$

HC0076

19. Which of the following is not electrophilic addition reaction ?
(1) Addition of H^+/H_2O on alkene
(2) Addition of dihydrogen on alkenes
(3) Addition of halogen on alkenes
(4) Addition of hydrogen halides on alkenes

HC0077

20. $CH_3-CH=CH_2 \xrightarrow{HBr} \underset{\text{(A)}}{CH_3-\underset{\underset{Br}{|}}{CH}-CH_3} + \underset{\text{(B)}}{CH_3-CH_2-CH_2-Br}$

(a) The product A is major
(b) Formation of A follows markovnikov rule
(c) Carbocation formed in A is less stable than that formed in B
(d) Formation of B follows markovnikov rule

The correct statements are :
(1) c, d (2) a, b, c, d
(3) a, b (4) a, d

HC0078

21. For the reaction

$CH_2=CH_2 \xrightarrow[CCl_4]{Br_2} (A) \xrightarrow{\text{alc. KOH}} (B) \xrightarrow{NaNH_2} (C)$

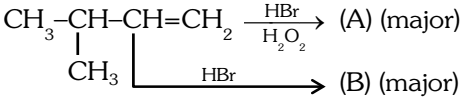
The product (C) is :
(1) $CH_2=CH_2$ (2) $CH_2=\underset{\underset{Br}{|}}{CH}$
(3) $H-C\equiv C-H$ (4) $\underset{\underset{Br}{|}}{CH_2}-CH_3$

HC0079

22. An alkene A on ozonolysis gives a mixture of ethanal and pentan-3-one. The IUPAC name of A is.
(1) 3-ethyl-3-pentene
(2) 3-ethylidene pentane
(3) 3-ethyl pent-2-ene
(4) 1,1-diethyl prop-1-ene

HC0080

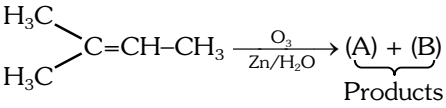
23. For the reaction :



The incorrect statement is :
(1) A and B are chain isomers
(2) A and B are position isomers
(3) A is 1-bromo-3-methyl butane
(4) B is 2-bromo-2-methyl butane

HC0081

24. For the reaction



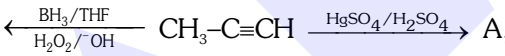
(1) One of the product only show positive tollens test
(2) Both product shows positive tollen's test
(3) Both product shows positive haloform test
(4) Both 1 & 3 are correct

HC0082

ALKYNES

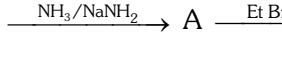
25. Which of the following compound will not give a precipitate with Tollen's reagent
(1) ethyne (2) 1-butyne
(3) 3-methyl-1-butyne (4) 1-pentene

HC0028

26.  A,

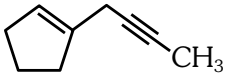
A and B are
(1) CH_3CH_2CHO, CH_3COCH_3
(2) CH_3COCH_3, CH_3CH_2CHO
(3) both are CH_3COCH_3
(4) CH_3COCH_3, $CH_3CH_2CH_2OH$

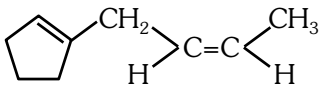
HC0029

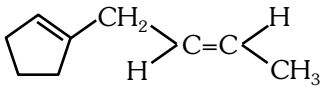
27.  B,

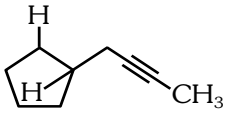
A and B are
(1) $MeCH_2C{\equiv}CNa$, $MeCH_2C{\equiv}C{-}Et$
(2) $MeCH_2CH{=}CH_2$, $MeCH_2{-}CHEt{-}CH_3$
(3) $MeCH_2CH{=}CHNH_2$, $MeCH_2CH{=}CH{-}NHBr$
(4) $MeCH_2C{\equiv}C{-}NH_2$, $MeC{\equiv}C{-}NH{-}Br$

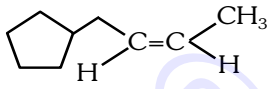
HC0030

28.  product will be :

(1) 

(2) 

(3) 

(4) 

HC0031

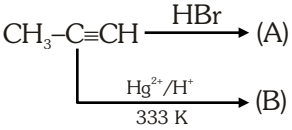
29. To distinguish between propene and propyne, the reagent would be -
(1) Bromine
(2) Alkaline $KMnO_4$
(3) Ammonical silver nitrate
(4) Ozone

HC0032

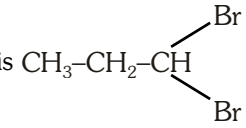
30. The most suitable reagent to differentiate ethyne and ethene is :
(1) Br_2 in CCl_4 (2) $NaHCO_3$
(3) NaOH (4) $NaNH_2$

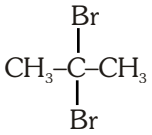
HC0083

31. For the reaction :

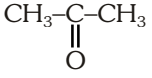


Consider statements :-

(a) Product A is 

(b) Product A is 

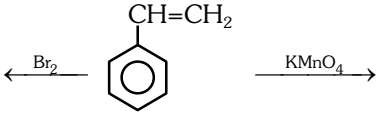
(c) Product B is $CH_3{-}CH_2{-}CH{=}O$

(d) Product B is 

The correct statements are :
(1) b, d (2) a, c
(3) only b (4) only a

HC0084

AROMATIC HYDROCARBONS

32. A  B; A and B respectively are

(1) o-bromo styrene, benzoic acid
(2) p-bromostyrene, benzaldehyde
(3) m-bromostyrene, benzaldehyde
(4) Styrene dibromide, benzoic acid

HC0035

33. The ozonolysis product of 1, 2-dimethyl benzene is/are :-

(1) Only $CH_3-\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}-CH_3$

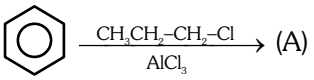
(2) $CH_3-\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}-H + CH_3-\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}-CH_3$

(3) $H-\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}-H + CH_3-\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}-CH_3$

(4) $CH_3\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}CH_3 + HC-\underset{\underset{O}{\|}}{C}H + CH_3\underset{\underset{O}{\|}}{C}-\underset{\underset{O}{\|}}{C}-H$

HC0036

34. For the reaction :

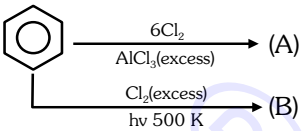


Correct statement is :-

(1) A is n-propyl benzene
(2) It is a friedel craft alkylation
(3) A is iso propyl benzene
(4) Both 2 & 3

AH0085

35. For the reaction



(1) A is not aromatic
(2) B is aromatic
(3) A is aromatic
(4) B is hexachlorobenzene

AH0086

EXERCISE-I (Conceptual Questions) ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**1**	**3**	**3**	**3**	**4**	**4**	**4**	**1**	**3**	**2**	**4**	**3**	**3**	**3**	**1**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**2**	**4**	**3**	**2**	**3**	**3**	**3**	**1**	**4**	**4**	**2**	**1**	**2**	**3**	**4**
Que.	31	32	33	34	35										
Ans.	**1**	**4**	**4**	**4**	**3**										

EXERCISE-II (Previous Year Questions) AIPMT/NEET

AIPMT 2007

1. Reduction of aldehydes and ketones into hydrocarbons using zinc amalgam and conc. HCl is called
(1) Cope reduction
(2) Dow reduction
(3) Wollf-kishner reduction
(4) Clemmensen reduction

AH0039

2. Which of the compounds with molecular formula C_5H_{10} yields acetone on ozonolysis
(1) 3-Methyl-1-butene
(2) Cyclopentene
(3) 2-Methyl-1-butene
(4) 2-Methyl-2-butene

HC0040

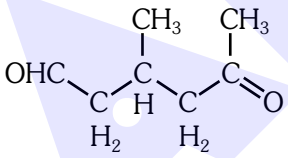
AIPMT 2010

3. Liquid hydrocarbons can be converted to a mixture of gasesous hydrocarbons by :-
(1) Hydrolysis
(2) Oxidation
(3) Cracking
(4) Distillation under reduced pressure

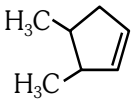
HC0041

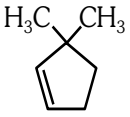
AIPMT 2015

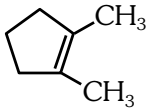
4. A single compound of the structure :-

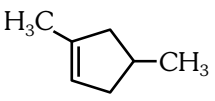


is obtainable from ozonolysis of which of the following cyclic compounds ?

(1) 

(2) 

(3) 

(4) 

HC0044

Re-AIPMT 2015

5. 2,3–Dimethyl–2–butene can be prepared by heating which of the following compounds with a strong acid ?
(1) $(CH_3)_2C=CH-CH_2-CH_3$
(2) $(CH_3)_2CH-CH_2-CH=CH_2$
(3) $(CH_3)_2CH-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH=CH_2$
(4) $(CH_3)_3C-CH=CH_2$

HC0045

6. The oxidation of benzene by V_2O_5 in the presence of air produces :
(1) benzoic acid (2) benzaldehyde
(3) benzoic anhydride (4) maleic anhydride

HC0046

NEET(UG) 2018

7. Hydrocarbon (A) reacts with bromine by substitution to form an alkyl bromide which by Wurtz reaction is converted to gaseous hydrocarbon containing less than four carbon atoms. (A) is
(1) $CH\equiv CH$ (2) $CH_2=CH_2$
(3) CH_3-CH_3 (4) CH_4

HC0049

8. The compound C_7H_8 undergoes the following reactions :

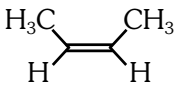
$$C_7H_8 \xrightarrow{3Cl_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{Zn/HCl} C$$

The product 'C' is
(1) m–bromotoluene
(2) o–bromotoluene
(3) 3–bromo–2,4,6–trichlorotoluene
(4) p–bromotoluene

AH0050

NEET(UG) 2019

9. The most suitable reagent for the following conversion is :-

$H_3C-C\equiv C-CH_3 \longrightarrow$ 

cis-2-butene

(1) Na/liquid NH_3 (2) H_2, Pd/C, quinoline
(3) Zn/HCl (4) Hg^{2+}/H^+, H_2O

HC0087

10. An alkene "A" on reaction with O_3 and $Zn–H_2O$ gives propanone and ethanal in equimolar ratio. Addition of HCl to alkene "A" gives "B" as the major product. The structure of product "B" is :-

(1) $Cl–CH_2–CH_2–\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{CH}}}}$

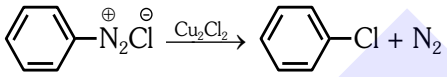
(2) $H_3C–CH_2–\underset{\displaystyle CH_3}{\overset{\displaystyle CH_2Cl}{\overset{|}{\underset{|}{CH}}}}$

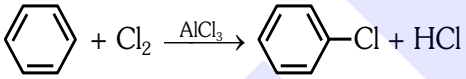
(3) $H_3C–CH_2–\underset{\displaystyle Cl}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}–CH_3$

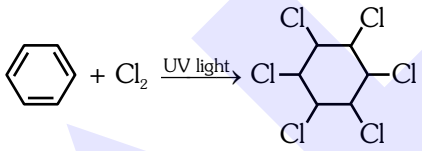
(4) $H_3C–\underset{\displaystyle Cl}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{CH}}}}–\underset{\displaystyle CH_3}{\overset{\displaystyle CH}{\overset{|}{\underset{|}{CH}}}}$

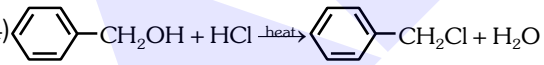
HC0088

11. Among the following, the reaction that proceeds through an electrophilic substitution is :

(1) 

(2) 

(3) 

(4) 

AH0089

NEET(UG) 2019 (ODISHA)

12. The alkane that gives only one mono-chloro product on chlorination with Cl_2 in presence of diffused sunlight is :-

(1) 2,2-dimethylbutane

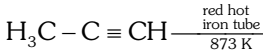
(2) neopentane

(3) n-pentane

(4) Isopentane

HC0090

13. In the following reaction,



the number of sigma(σ) bonds present in the product A is :-

(1) 21 (2) 9

(3) 24 (4) 18

AH0091

NEET(UG) 2020

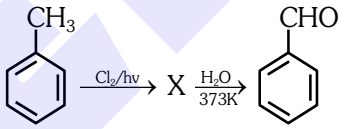
14. Which of the following alkane cannot be made in good yield by Wurtz reaction ?

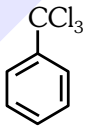
(1) n-Butane (2) n-Hexane

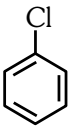
(3) 2,3-Dimethylbutane (4) n-Heptane

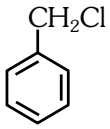
HC0110

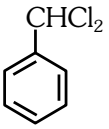
15. Identify compound X in the following sequence of reactions :



(1) 

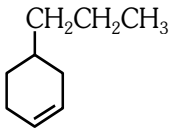
(2) 

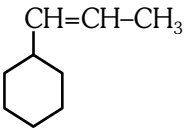
(3) 

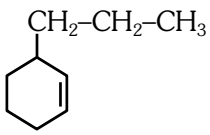
(4) 

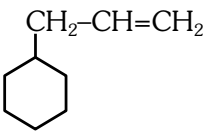
AH0111

16. An alkene on ozonolysis gives methanal as one of the product. Its structure is :

(1) 

(2) 

(3) 

(4) 

HC0112

NEET(UG) 2020 (COVID-19)

17. $CH_3CH_2CH = CH_2 \xrightarrow[H_2O_2,OH^-]{B_2H_6} Z$

What is Z ?

(1) $CH_3CH_2CH_2CH_2OH$

(2) $CH_3CH_2\underset{\underset{OH}{|}}{C}HCH_3$

(3) $CH_3CH_2CH_2CHO$

(4) $CH_3CH_2CH_2CH_3$

HC0113

NEET(UG) 2021

18. The major product formed in dehydrohalogenation reaction of 2-Bromo pentane is Pent-2-ene. This product formation is based on ?

(1) Saytzeff's Rule (2) Hund's Rule

(3) Hoffmann Rule (4) Huckel's Rule

HC0114

19. $CH_3CH_2COO^-Na^+ \xrightarrow[Heat]{NaOH, +?} CH_3CH_3 + Na_2CO_3$.

Consider the above reaction and identify the missing reagent/chemical.

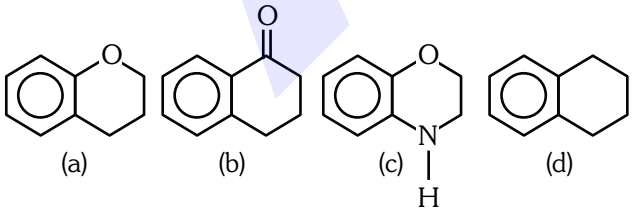
(1) B_2H_6 (2) Red Phosphorus

(3) CaO (4) DIBAL-H

HC0115

NEET(UG) 2021 (Paper-2)

20. Rank the following compounds in decreasing order of reactivity towards electrophilic aromatic substitution reaction (ESR).



(a) (b) (c) (d)

(1) (c) > (a) > (b) > (d)

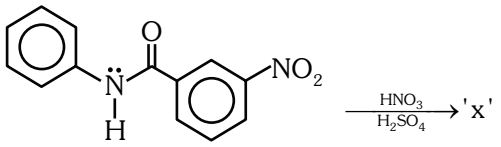
(2) (c) > (a) > (d) > (b)

(3) (d) > (c) > (b) > (a)

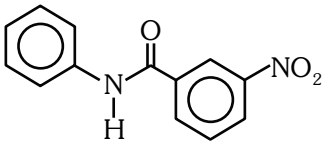
(4) (a) > (c) > (d) > (b)

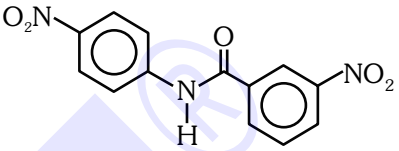
AH0116

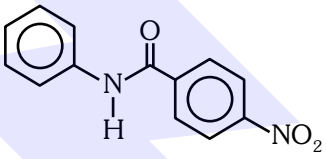
21. In the following reaction,

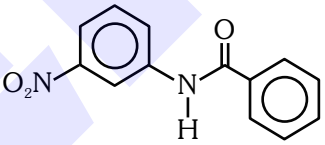


the structure of major product 'X' is

(1) 

(2) 

(3) 

(4) 

AH0117

22. Which of the following alcohols on dehydration with conc. H_2SO_4 at 440 K will give propylene?

(i) *n*-propyl alcohol

(ii) Isobutyl alcohol

(iii) Isopropyl alcohol

(iv) *n*-butyl alcohol

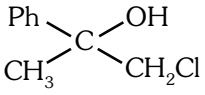
(1) (ii), (iii) (2) (i), (iii)

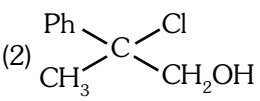
(3) (i), (ii), (iii) (4) (ii), (iii), (iv)

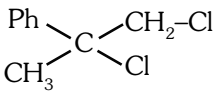
HC0118

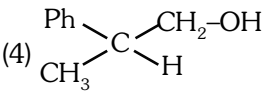
23. $\begin{matrix}Ph\\CH_3\end{matrix}\!\!>\!C = CH_2 \xrightarrow{Cl_2+H_2O} \text{'A'}$

Compound (A) is

(1) 

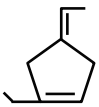
(2) 

(3) 

(4) 

HC0119

24. If the following compound is treated with Pd/C in excess of H_2 gas, how many stereoisomers of the product will be obtained?



(1) 1 (2) 2

(3) 3 (4) 4

HC0120

25. Which of the following gives white precipitate with ammoniacal $AgNO_3$?

(1) C_2H_6 (2) C_3H_4

(3) C_3H_8 (4) C_4H_{10}

HC0121

NEET(UG) 2022

26. Compound X on reaction with O_3 followed by Zn/ H_2O gives formaldehyde and 2-methyl propanal as products. The compound X is :

(1) 2-Methylbut-l-ene

(2) 2-Methylbut-2-ene

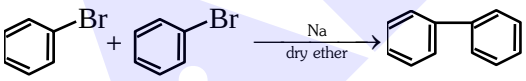
(3) Pent-2-ene

(4) 3-Methylbut-l-ene

HC0122

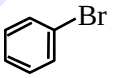
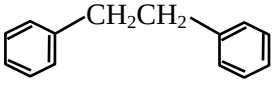
NEET(UG) 2022 (OVERSEAS)

27. The correct reaction among the following is

(1) 

(2) $2CH_3CH_2Br \xrightarrow[\text{dry ether}]{Mg} CH_3CH_2CH_2CH_3$

(3) $2CH_3CH_2Br \xrightarrow[\text{Ethanol}]{Na} CH_3CH_2CH_2CH_3$

(4) $CH_3CH_2Br + 2$  $\xrightarrow[\text{dry ether}]{Na}$ 

AH0123

28. Match **List-I** with **List-II** :

List-I (Compound)	**List-II (Boiling Point in K)**
(a) 	(i) 300.9
(b) 	(ii) 282.5
(c) 	(iii) 309.1
(d) 	(iv) 341.9

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

(1) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)

(2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

(3) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)

(4) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)

HC0124

29. The product formed in the following reaction sequence is

$CH_3–CH_2–CH=CH_2 \xrightarrow[\text{(ii) Alcoholic KOH}]{\text{(i) HBr, Benzoyl peroxide, heating}}$

(1) $CH_3–CH=CH–CH_3$

(2) $CH_3–CH_2–CH=CH_2$

(3) $CH_3–CH_2–CH_2–CH_2–OH$

(4) $CH_3–CH_2–\underset{\displaystyle OH}{\underset{|}{CH}}–CH_3$

HC0125

30. The compound obtained by addition of water to an alkyne having more than two carbons, in presence of $HgSO_4$ and dilute H_2SO_4 at 333 K is

(1) an aldehyde

(2) an alcohol

(3) a ketone

(4) a vicinal diol

HC0126

Re-NEET(UG) 2022

31. The decreasing order of boiling points of the following alkanes is :

(a) Heptane

(b) butane

(c) 2-methylbutane
(d) 2-methylpropane
(e) hexane

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

(1) (a) > (c) > (e) > (d) > (b)

(2) (c) > (d) > (a) > (e) > (b)

(3) (a) > (e) > (b) > (c) > (d)

(4) (a) > (e) > (c) > (b) > (d)

HC0127

32. The incorrect method for the synthesis of alkenes is:

(1) treatment of alkynes with Na in liquid NH_3

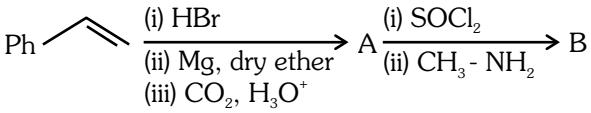
(2) heating alkyl halides with alcoholic KOH

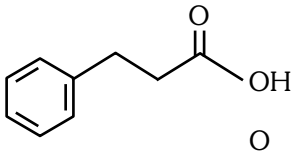
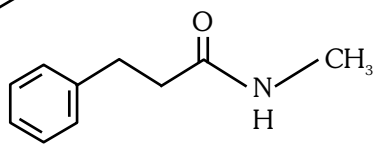
(3) treating alkyl halides in aqueous KOH solution

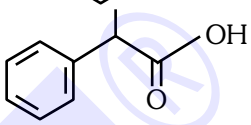
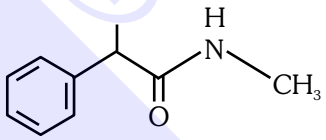
(4) treating vicinal dihalides with Zn metal

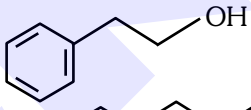
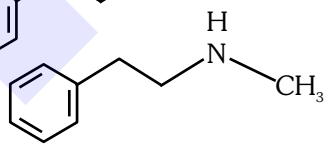
HC0128

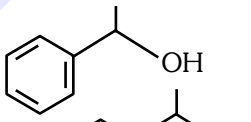
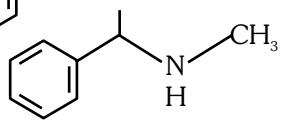
33. The products A and B in the following reaction sequence are :



(1) A=  ;
B= 

(2) A=  ;
B= 

(3) A=  ;
B= 

(4) A=  ;
B= 

HC0129

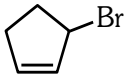
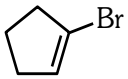
EXERCISE-II (Previous Year Questions) ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	4	3	4	4	4	4	1	2	3	2	2	1	4	4
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	4	1	1	3	2	2	2	1	3	2	4	1	2	2	3
Que.	31	32	33												
Ans.	4	3	2												

EXERCISE-III (Analytical Questions) — Master Your Understanding

1.  $\xrightarrow{Br_2}$ A $\xrightarrow{\text{alc. KOH}}$ B ;

What is the structure of B

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

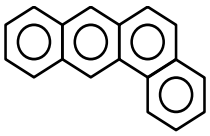
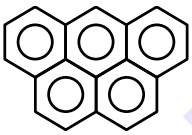
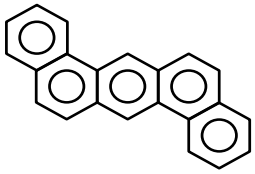
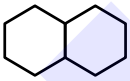
HD0057

2. Which of the following is maximum reactive towards NBS

(1) $PhCH_3$
(2) Ph CH_2–CH_3
(3) $PhCH_2$–CH=CH_2
(4) Ph–CH(–CH_3)–CH=CH_2

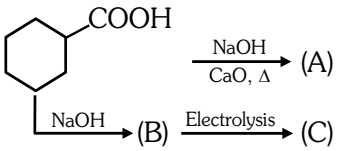
HC0058

3. Which of the following is not carcinogenic ?

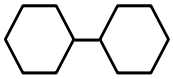
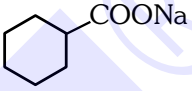
(1) 
(2) 
(3) 
(4) 

HC0092

4. For the reaction given :-



Which is incorrect ?

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

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5. CH_3–C≡C–H $\xrightarrow[1\%\ HgSO_4]{40\%\ H_2SO_4}$ X [Intermediate] $\xrightarrow{(y)\ \text{Isomerism}}$ Z

Identify X, Y and Z

	X	Y	Z
(1)	Prop-1-en-2-ol	Metamerism	Acetone
(2)	Prop-1-en-1-ol	Tautomerism	Propionaldehyde
(3)	Prop-2-en-2-ol	Geometrical isomerism	Acetone
(4)	Prop-1-en-2-ol	Tautomerism	Acetone

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EXERCISE-III (Analytical Questions) — ANSWER KEY

Que.	1	2	3	4	5
Ans.	4	4	4	3	4