

PYQSide

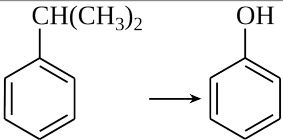
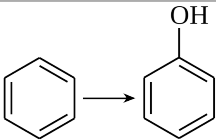
NEET ALCOHOLS, PHENOLS AND ETHERS — PYQS

Max. Marks: 220

Questions: 55

Section A (MCQ)

Q.1 Match **List-I** with **List-II** : [NEET (UG) 2026]

List-I	
A.	
B.	$\text{CH}_3\text{COOH} \longrightarrow \text{CH}_3\text{CH}_2\text{OH}$
C.	$\text{CH}_3\text{CH}_2\text{CH}_2\text{OH} \longrightarrow \text{CH}_3-\underset{\text{OH}}{\text{CH}}-\text{CH}_3$
D.	

List-II	
I.	(i) Oleum; (ii) NaOH, Δ ; (iii) H^+
II.	(i) O_2 ; (ii) $\text{H}_2\text{O}/\text{H}^+$
III.	(i) CH_3OH , H^+ ; (ii) H_2 , catalyst
IV.	(i) conc. H_2SO_4 , Δ ; (ii) $\text{H}^+/\text{H}_2\text{O}$

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

Scan or tap for the full solution



Q.2 Which one of the following alcohols reacts instantaneously with Lucas reagent?

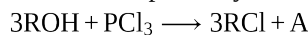
[NEET (UG) 2024]

- (1) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}_2\text{OH}$
 $\text{CH}_3-\text{CH}_2-\underset{\text{CH}_3}{\text{CH}}-\text{OH}$
 (2)
 $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2\text{OH}$
 (3)
 $\text{CH}_3-\underset{\text{CH}_3}{\text{C}}-\text{OH}$
 (4)

Scan or tap for the full solution



Q.3 The products A and B obtained in the following reactions, respectively, are



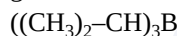
- (1) POCl_3 and H_3PO_3 (2) POCl_3 and H_3PO_4
 (3) H_3PO_4 and POCl_3 (4) H_3PO_3 and POCl_3

Scan or tap for the full solution

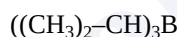


Q.4 Given below are two statements:

Statement-I: Propene on treatment with diborane gives an addition product with the formula



Statement-II: Oxidation of



with hydrogen peroxide in presence of NaOH gives propan-2-ol.

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

[RE-NEET (UG) 2024]

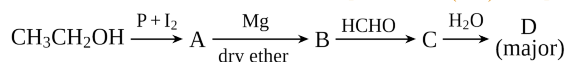
- (1) Statement-I is correct but Statement-II is incorrect
 (2) Statement-I is incorrect but Statement-II is correct
 (3) Both Statement-I and Statement-II are correct
 (4) Both Statement-I and Statement-II are incorrect

Scan or tap for the full solution



Q.5 Identify D in the following sequence of reactions:

[RE-NEET (UG) 2024]



- (1) n-propyl alcohol (2) isopropyl alcohol
 (3) propanal (4) propionic acid

Scan or tap for the full solution



Q.6 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): Phenol is more acidic than ethanol.

Reason (R): The phenoxide ion is stabilised by resonance, whereas the ethoxide ion is not.

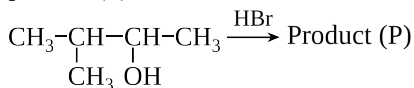
[NEET (UG) 2023]

- (1) Both A and R are true and R is the correct explanation of A
 (2) Both A and R are true but R is not the correct explanation of A
 (3) A is true but R is false
 (4) A is false but R is true

Scan or tap for the full solution

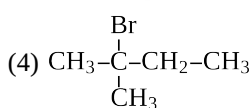
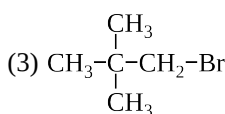
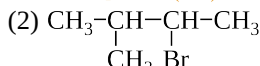
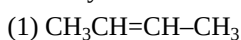


Q.7 Consider the following reaction and identify the product (P).



3-Methylbutan-2-ol

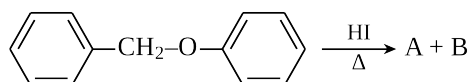
[NEET (UG) 2023]



Scan or tap for the full solution

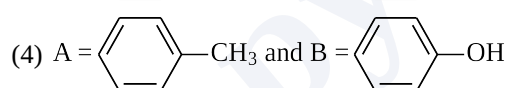
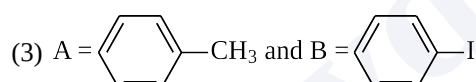
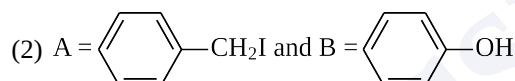
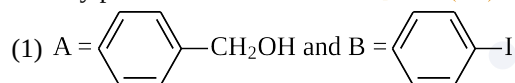


Q.8 Consider the following reaction



Identify products A and B :-

[NEET (UG) 2023]

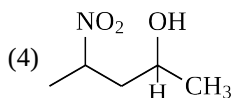
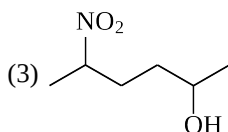
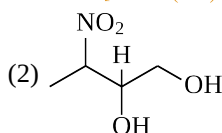
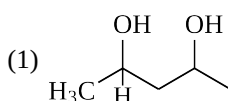


Scan or tap for the full solution



Q.9 Which amongst the following will be most readily dehydrated under acidic conditions?

[NEET (UG) 2023]



Scan or tap for the full solution



Q.10 Given below are two statements:

Statement-I: The acidic strength of monosubstituted nitrophenol is higher than phenol because of electron withdrawing nitro group.

Statement-II: o-nitrophenol, m-nitrophenol and p-nitrophenol will have same acidic strength as they have one nitro group attached to the phenolic ring.

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

[NEET (UG) 2022]

- (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.

Scan or tap for the full solution



Q.11 Given below are two statements:

Statement-I: In Lucas test, primary, secondary and tertiary alcohols are distinguished on the basis of their reactivity with conc. HCl + ZnCl₂, known as Lucas Reagent.

Statement-II: Primary alcohols are most reactive and immediately produce turbidity at room temperature on reaction with Lucas Reagent.

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

[NEET (UG) 2022]

- (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

Scan or tap for the full solution



Q.12 Match the reagents (**List-I**) with the product (**List-II**) obtained from phenol.

List-I		List-II	
a.	(i) NaOH (ii) CO ₂ (iii) H ⁺	i.	Benzoquinone
b.	(i) Aqueous NaOH + CHCl ₃ (ii) H ⁺	ii.	Benzene
c.	Zn dust, Δ	iii.	Salicylaldehyde
d.	Na ₂ Cr ₂ O ₇ , H ₂ SO ₄	iv.	Salicylic acid

Choose the correct answer from the options given below :

[NEET (UG) 2022 (Phase 2)]

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

Scan or tap for the full solution



Q.13 Which one of the following reaction sequence is incorrect method to prepare phenol?

[NEET (UG) 2022 (Phase 2)]

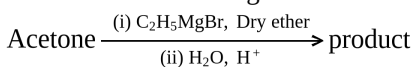
- (1) , oleum, NaOH, H_3O^+
 (2) Aniline, $\text{NaNO}_2 + \text{HCl}$, H_2O , heating
 (3) Cumene, O_2 , H_3O^+

- (4) , NaOH, STP condition

Scan or tap for the full solution



Q.14 What is the IUPAC name of the organic compound formed in the following chemical reaction?



[NEET (UG) 2021]

- (1) 2-methylbutan-2-ol (2) 2-methylpropan-2-ol
 (3) pentan-2-ol (4) pentan-3-ol

Scan or tap for the full solution



Q.15 Anisole on cleavage with HI gives :

[NEET (UG) 2020]

- (1) + CH_3OH (2) + $\text{C}_2\text{H}_5\text{I}$
 (3) + $\text{C}_2\text{H}_5\text{OH}$ (4) + CH_3I

Scan or tap for the full solution



Q.16 Reaction between acetone and methylmagnesium chloride followed by hydrolysis will give :

[NEET (UG) 2020]

- (1) Sec. butyl alcohol (2) Tert. butyl alcohol
 (3) Isobutyl alcohol (4) Isopropyl alcohol

Scan or tap for the full solution



Q.17 The compound that is most difficult to protonate is :

[NEET (UG) 2019]

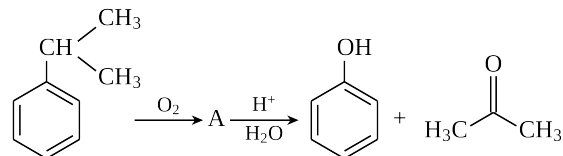
- (1) $\text{H}-\text{O}-\text{H}$ (2) $\text{H}_3\text{C}-\text{O}-\text{H}$
 (3) $\text{H}_3\text{C}-\text{O}-\text{CH}_3$ (4) $\text{Ph}-\text{O}-\text{H}$

Scan or tap for the full solution



Q.18 The structure of intermediate A in the following reaction, is :

[NEET (UG) 2019]



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

Scan or tap for the full solution



Q.19 The compound A on treatment with Na gives B, and with PCl_5 gives C. B and C react together to give diethyl ether. A, B and C are in the order

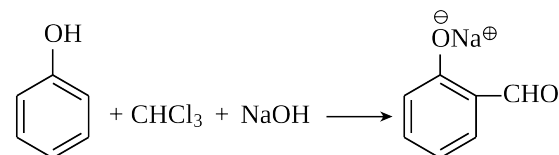
[NEET 2018]

- (1) $\text{C}_2\text{H}_5\text{OH}$, C_2H_6 , $\text{C}_2\text{H}_5\text{Cl}$
 (2) $\text{C}_2\text{H}_5\text{OH}$, $\text{C}_2\text{H}_5\text{Cl}$, $\text{C}_2\text{H}_5\text{ONa}$
 (3) $\text{C}_2\text{H}_5\text{Cl}$, C_2H_6 , $\text{C}_2\text{H}_5\text{OH}$
 (4) $\text{C}_2\text{H}_5\text{OH}$, $\text{C}_2\text{H}_5\text{ONa}$, $\text{C}_2\text{H}_5\text{Cl}$

Scan or tap for the full solution



Q.20 In the reaction,



the electrophile involved is

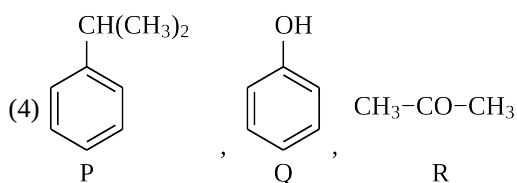
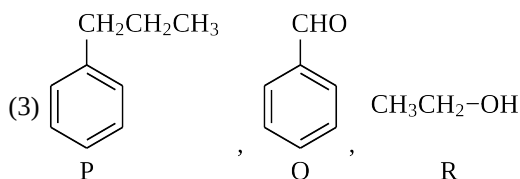
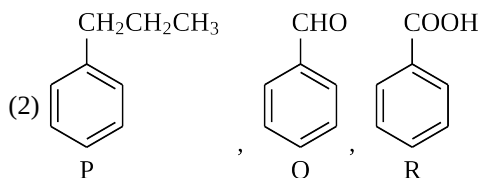
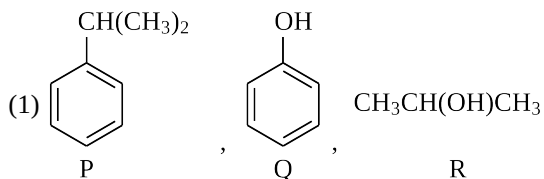
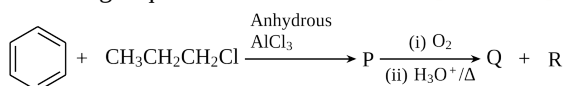
[NEET 2018]

- (1) dichloromethyl cation (CHCl_2^+)
 (2) formyl cation (CHO^+)
 (3) dichloromethyl anion (CHCl_2^-)
 (4) dichlorocarbene ($:\text{CCl}_2$)

Scan or tap for the full solution



Q.21 Identify the major products P, Q and R in the following sequence of reactions : [NEET 2018]



Scan or tap for the full solution



Q.22 The heating of phenyl methyl ether with HI produces [NEET 2017]

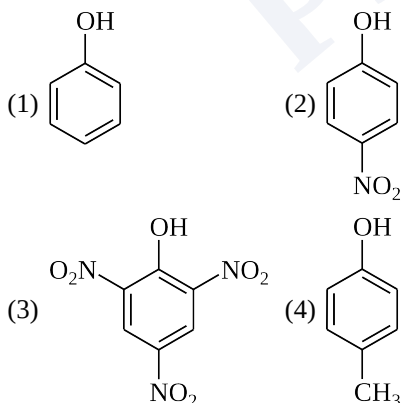
- (1) iodobenzene (2) phenol
(3) benzene (4) ethyl chloride.

Scan or tap for the full solution



Q.23 Which one is the most acidic compound?

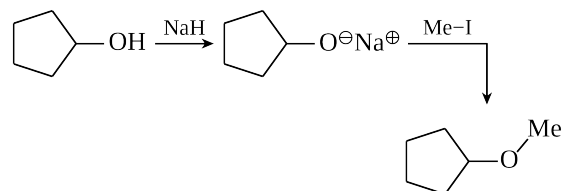
[NEET 2017]



Scan or tap for the full solution



Q.24 The reaction



can be classified as

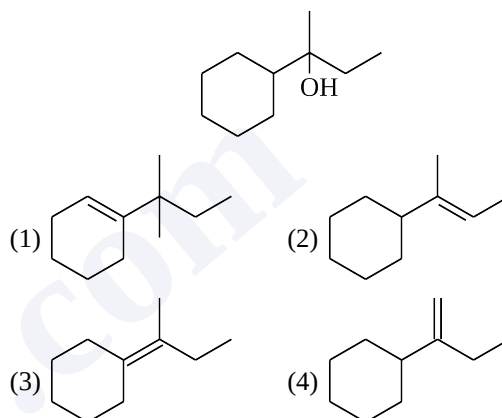
[NEET 2016 (Phase 1)]

- (1) dehydration reaction
(2) Williamson alcohol synthesis reaction
(3) Williamson ether synthesis reaction
(4) alcohol formation reaction.

Scan or tap for the full solution



Q.25 Which of the following is not the product of dehydration of [AIPMT 2015]



Scan or tap for the full solution



Q.26 Reaction of phenol with chloroform in presence of dilute sodium hydroxide finally introduces which one of the following functional group?

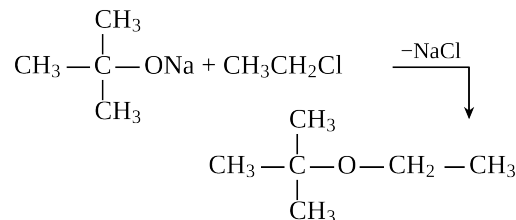
[AIPMT 2015]

- (1) $-\text{COOH}$ (2) $-\text{CHCl}_2$ (3) $-\text{CHO}$ (4) $-\text{CH}_2\text{Cl}$

Scan or tap for the full solution



Q.27 The reaction,



is called

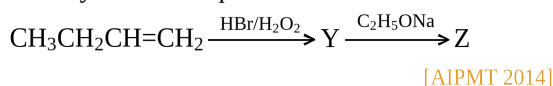
[AIPMT 2015 (Cancelled)]

- (1) Etard reaction
(2) Gattermann-Koch reaction
(3) Williamson synthesis
(4) Williamson continuous etherification process

Scan or tap for the full solution



Q.28 Identify Z in the sequence of reactions:



- (1) $\text{CH}_3-(\text{CH}_2)_3-\text{O}-\text{CH}_2\text{CH}_3$
- (2) $(\text{CH}_3)_2\text{CH}-\text{O}-\text{CH}_2\text{CH}_3$
- (3) $\text{CH}_3(\text{CH}_2)_4-\text{O}-\text{CH}_3$
- (4) $\text{CH}_3\text{CH}_2-\text{CH}(\text{CH}_3)-\text{O}-\text{CH}_2\text{CH}_3$

Scan or tap for the full solution



Q.29 Among the following sets of reactants which one produces anisole? [AIPMT 2014]

- (1) CH_3CHO ; RMgX
- (2) $\text{C}_6\text{H}_5\text{OH}$; NaOH ; CH_3I
- (3) $\text{C}_6\text{H}_5\text{OH}$; neutral FeCl_3
- (4) $\text{C}_6\text{H}_5\text{CH}_3$; CH_3COCl ; AlCl_3

Scan or tap for the full solution



Q.30 Which of the following will not be soluble in sodium hydrogen carbonate? [AIPMT 2014]

- (1) 2,4,6-Trinitrophenol
- (2) Benzoic acid
- (3) o-Nitrophenol
- (4) Benzenesulphonic acid

Scan or tap for the full solution



Q.31 Among the following ethers, which one will produce methyl alcohol on treatment with hot concentrated HI? [NEET 2013]

- (1) $\text{CH}_3-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{O}-\text{CH}_3$
- (2) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2-\text{O}-\text{CH}_3$
- (3) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_3$
- (4) $\text{CH}_3-\text{CH}_2-\underset{\text{CH}_3}{\text{CH}}-\text{O}-\text{CH}_3$

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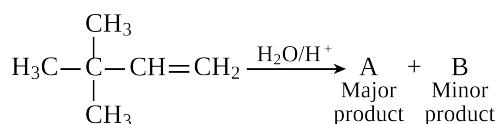
Q.32 Which of the following compounds can be used as antifreeze in automobile radiators? [AIPMT 2012 (Mains)]

- (1) Methyl alcohol
- (2) Glycol
- (3) Nitrophenol
- (4) Ethyl alcohol

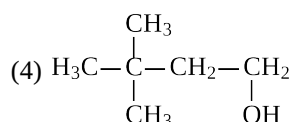
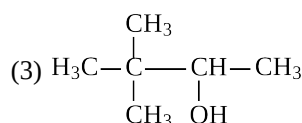
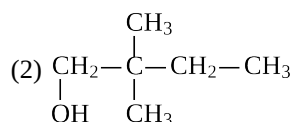
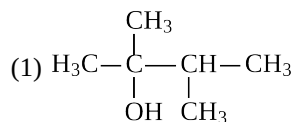
Scan or tap for the full solution



Q.33 In the following reaction



The major product is [AIPMT 2012 (Prelims)]



Scan or tap for the full solution



Q.34 Match the compounds given in List-I with List-II and select the suitable option using the code given below. [AIPMT 2011 (Mains)]

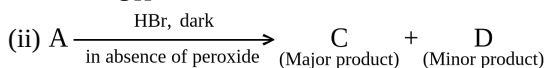
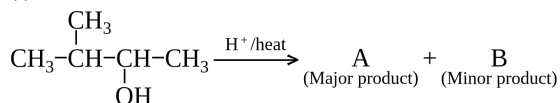
List-I		List-II	
A.	Benzaldehyde	i.	Phenolphthalein
B.	Phthalic anhydride	ii.	Benzoin condensation
C.	Phenyl benzoate	iii.	Oil of wintergreen
D.	Methyl salicylate	iv.	Fries rearrangement

- (1) (A)-(iv), (B)-(i), (C)-(iii), (D)-(ii)
- (2) (A)-(iv), (B)-(ii), (C)-(iii), (D)-(i)
- (3) (A)-(ii), (B)-(iii), (C)-(iv), (D)-(i)
- (4) (A)-(ii), (B)-(i), (C)-(iv), (D)-(iii)

Scan or tap for the full solution

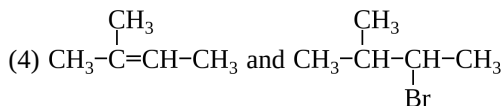
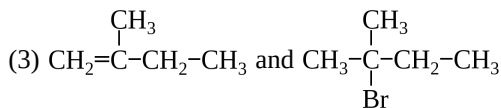
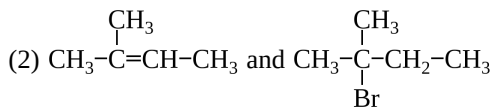
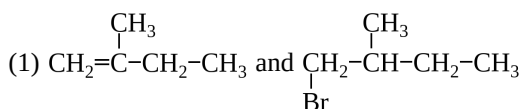


Q.35 In the following reactions, (i)



the major products (A) and (C) are respectively

[AIPMT 2011 (Prelims)]



Scan or tap for the full solution



Q.36 When glycerol is treated with excess of HI, it produces

[AIPMT 2010 (Mains)]

- (1) 2-iodopropane (2) allyl iodide
(3) propene (4) glycerol triiodide

Scan or tap for the full solution



Q.37 Given are cyclohexanol (I), acetic acid (II), 2, 4, 6-trinitrophenol (III) and phenol (IV). In these the order of decreasing acidic character will be

[AIPMT 2010 (Prelims)]

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

Scan or tap for the full solution



Q.38 Among the following four compounds

- (i) Phenol (ii) Methyl phenol
(iii) Meta-nitrophenol (iv) Para-nitrophenol

The acidity order is

[AIPMT 2010 (Prelims)]

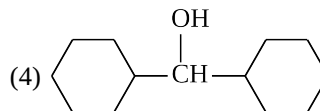
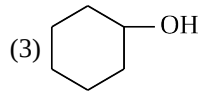
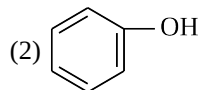
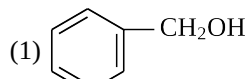
- (1) (iv) > (iii) > (i) > (ii) (2) (iii) > (iv) > (i) > (ii)
(3) (i) > (iv) > (iii) > (ii) (4) (ii) > (i) > (iii) > (iv)

Scan or tap for the full solution



Q.39 Which of the following compounds has the most acidic nature?

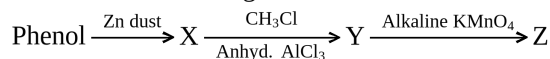
[AIPMT 2010 (Prelims)]



Scan or tap for the full solution



Q.40 Consider the following reaction :



the product Z is

[AIPMT 2009]

- (1) benzaldehyde (2) benzoic acid
(3) benzene (4) toluene

Scan or tap for the full solution



Q.41 HOCH₂CH₂OH on heating with periodic acid gives

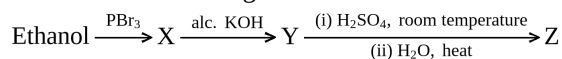
[AIPMT 2009]

- (1) 2HCOOH (2) $\begin{array}{c} \text{CHO} \\ | \\ \text{CHO} \end{array}$
(3) $\text{H}_2\text{C}=\text{O}$ (4) 2CO₂

Scan or tap for the full solution



Q.42 Consider the following reaction :



the product Z is

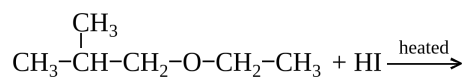
[AIPMT 2009]

- (1) CH₃CH₂-O-CH₂-CH₃
(2) CH₃-CH₂-O-SO₃H
(3) CH₃CH₂OH
(4) CH₂=CH₂

Scan or tap for the full solution



Q.43 In the reaction :



Which of the following compounds will be formed?

[AIPMT 2007]

- (1) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_3 + \text{CH}_3\text{CH}_2\text{OH}$
 (2) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2\text{OH} + \text{CH}_3\text{CH}_3$
 (3) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2\text{OH} + \text{CH}_3\text{CH}_2\text{I}$
 (4) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2-\text{I} + \text{CH}_3\text{CH}_2\text{OH}$

Scan or tap for the
full solution



Q.44 Ethylene oxide when treated with Grignard reagent yields [AIPMT 2006]

- (1) primary alcohol (2) secondary alcohol
 (3) tertiary alcohol (4) cyclopropyl alcohol

Scan or tap for the
full solution



Q.45 The major organic product in the reaction is
 $\text{CH}_3-\text{O}-\text{CH}(\text{CH}_3)_2 + \text{HI} \longrightarrow$ products

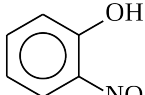
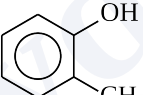
[AIPMT 2006]

- (1) $\text{CH}_3\text{I} + (\text{CH}_3)_2\text{CHOH}$ (2) $\text{CH}_3\text{OH} + (\text{CH}_3)_2\text{CHI}$
 (3) $\text{ICH}_2\text{OCH}(\text{CH}_3)_2$ (4) $\text{CH}_3\text{OC}(\text{CH}_3)_2\text{I}$

Scan or tap for the
full solution



Q.46 Which one of the following compounds is most acidic? [AIPMT 2005]

- (1) $\text{Cl}-\text{CH}_2-\text{CH}_2-\text{OH}$ (2) 
 (3)  (4) 

Scan or tap for the
full solution



Q.47 The $-\text{OH}$ group of an alcohol or the $-\text{COOH}$ group of a carboxylic acid can be replaced by $-\text{Cl}$ using [AIPMT 2004]

- (1) phosphorus pentachloride
 (2) hypochlorous acid
 (3) chlorine
 (4) hydrochloric acid

Scan or tap for the
full solution



Q.48 Which one of the following will not form a yellow precipitate on heating with an alkaline solution of iodine? [AIPMT 2004]

- (1) $\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$ (2) $\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CH}_3$
 (3) CH_3OH (4) $\text{CH}_3\text{CH}_2\text{OH}$

Scan or tap for the
full solution



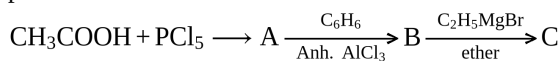
Q.49 Which one of the following can be oxidised to the corresponding carbonyl compound? [AIPMT 2004]

- (1) 2-Hydroxypropane
 (2) ortho-Nitrophenol
 (3) Phenol
 (4) 2-Methyl-2-hydroxypropane

Scan or tap for the
full solution



Q.50 In a set of the given reactions, acetic acid yielded a product C.



Product C would be [AIPMT 2003]

- (1) $\text{CH}_3\text{CH}(\text{OH})\text{C}_2\text{H}_5$ (2) $\text{CH}_3\text{COC}_6\text{H}_5$
 (3) $\text{CH}_3\text{CH}(\text{OH})\text{C}_6\text{H}_5$ (4) $\text{CH}_3-\overset{\text{C}_2\text{H}_5}{\text{C}}(\text{OH})\text{C}_6\text{H}_5$

Scan or tap for the
full solution



Q.51 n-Propyl alcohol and isopropyl alcohol can be chemically distinguished by which reagent? [AIPMT 2002]

- (1) PCl_5
 (2) reduction
 (3) oxidation with potassium dichromate
 (4) ozonolysis

Scan or tap for the
full solution



Q.52 When phenol is treated with CHCl_3 and NaOH , the product formed is [AIPMT 2002]

- (1) benzaldehyde (2) salicylaldehyde
 (3) salicylic acid (4) benzoic acid

Scan or tap for the
full solution



Q.53 In preparation of alkene from alcohol using Al_2O_3 which is the effective factor? [AIPMT 2001]

- (1) Porosity of Al_2O_3 (2) Temperature
 (3) Concentration (4) Surface area of Al_2O_3

Scan or tap for the
full solution



Q.54 Which of the following is correct? [AIPMT 2001]

- (1) On reduction, any aldehyde gives secondary alcohol.
 (2) Reaction of vegetable oil with H_2SO_4 gives glycerine
 (3) Alcoholic iodine with NaOH gives iodoform.
 (4) Sucrose on reaction with NaCl gives invert sugar.

Scan or tap for the
full solution



Q.55 Which reagent converts propene to 1-propanol ?

[AIPMT 2000]

- (1) H_2O , H_2SO_4
- (2) B_2H_6 , H_2O_2 , OH^-
- (3) $\text{Hg}(\text{OAc})_2$, $\text{NaBH}_4/\text{H}_2\text{O}$
- (4) Aq. KOH

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	3	4	4	2	1	1	4	2	1	3	3
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	4	4	1	4	2	4	2	4	4	4	2
Ques.	23	24	25	26	27	28	29	30	31	32	33
Ans.	3	3	1	3	3	1	2	3	1	2	1
Ques.	34	35	36	37	38	39	40	41	42	43	44
Ans.	4	2	1	1	1	2	2	3	3	3	1
Ques.	45	46	47	48	49	50	51	52	53	54	55
Ans.	1	3	1	3	1	4	3	2	2	3	2