

Questions with Answer Keys

MathonGo

Q1 - 2024 (01 Feb Shift 2)

Match List - I with List - II:

List-I

List-II

(Reactants)

Products

(A) Phenol, Zn/ Δ

(I) Salicylaldehyde

(B) Phenol, CHCl_3 , NaOH, HCl

(II) Salicylic acid

(C) Phenol, CO_2 , NaOH, HCl

(III) Benzene

(D) Phenol, Conc. HNO_3

(IV) Picric acid

Choose the correct answer from the options given below.

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

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

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

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

Q2 - 2024 (27 Jan Shift 1)

Given below are two statements:

Statement (I) : p-nitrophenol is more acidic than m-nitrophenol and o-nitrophenol.

Statement (II) : Ethanol will give immediate turbidity with Lucas reagent.

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

(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

Q3 - 2024 (27 Jan Shift 2)

Phenolic group can be identified by a positive:

(1) Phthalein dye test

(2) Lucas test

(3) Tollen's test

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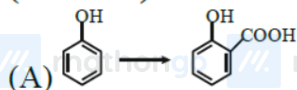
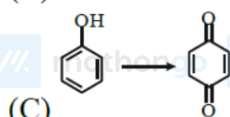
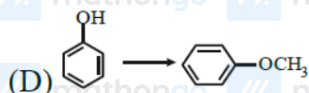
Questions with Answer Keys

MathonGo

(4) Carbylamine test

Q4 - 2024 (27 Jan Shift 2)

Match List-I with List-II.

List - I
(Reaction)List - II
(Reagent(s))(I) $\text{Na}_2\text{Cr}_2\text{O}_7, \text{H}_2\text{SO}_4$ (II) (i) NaOH (ii) CH_3Cl (III) (i) $\text{NaOH}, \text{CHCl}_3$
(ii) NaOH (iii) HCl (IV) (i) NaOH (ii) CO_2
(iii) HCl

Choose the correct answer from the options given below:

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

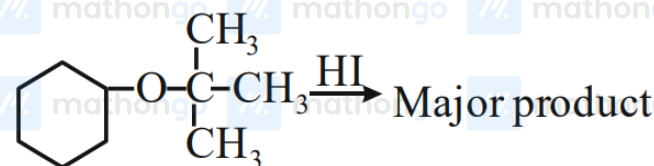
(2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

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

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

Q5 - 2024 (27 Jan Shift 2)

Major product formed in the following reaction is a mixture of:

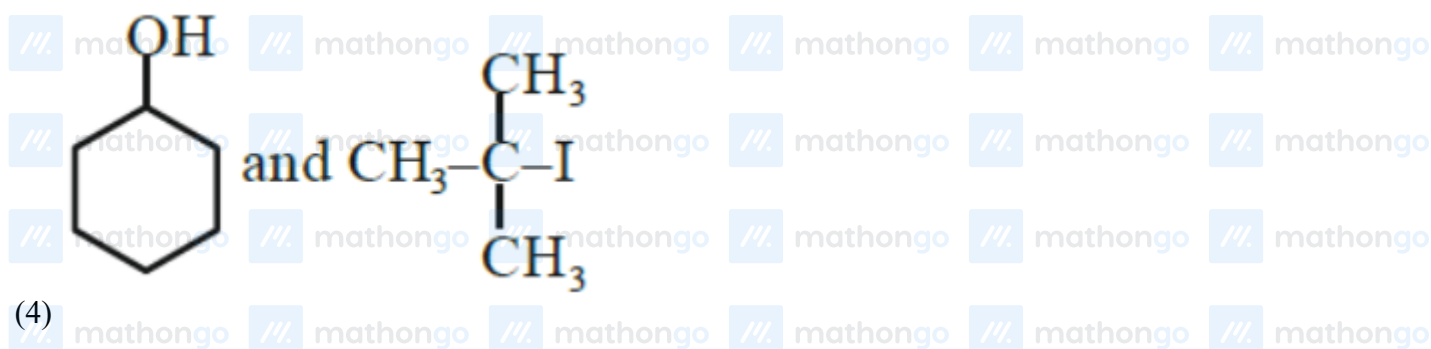


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Questions with Answer Keys

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Q6 - 2024 (29 Jan Shift 2)

Phenol treated with chloroform in presence of sodium hydroxide, which further hydrolysed in presence of an acid results

- (1) Salicylic acid
- (2) Benzene-1,2-diol
- (3) Benzene-1, 3-diol
- (4) 2-Hydroxybenzaldehyde

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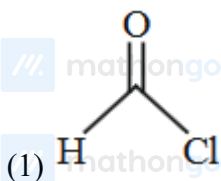
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Questions with Answer Keys

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Q7 - 2024 (30 Jan Shift 2)

Salicylaldehyde is synthesized from phenol, when reacted with



, NaOH

(2) CO2, NaOH(3) CCl4, NaOH(4) HCCL3, NaOH

Q8 - 2024 (31 Jan Shift 1)

Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Alcohols react both as nucleophiles and electrophiles.

Reason R: Alcohols react with active metals such as sodium, potassium and aluminum to yield corresponding alkoxides and liberate hydrogen.

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

(1) A is false but R is true.

(2) A is true but R is false.

(3) Both A and R are true and R is the correct explanation of A.

(4) Both A and R are true but R is NOT the correct explanation of A

Q9 - 2024 (31 Jan Shift 1)

Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: pK_a value of phenol is 10.0 while that of ethanol is 15.9.

Reason R: Ethanol is stronger acid than phenol.

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

(1) A is true but R is false.

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(2) A is false but R is true.

(3) Both A and R are true and R is the correct explanation of A .

(4) Both A and R are true but R is NOT the correct explanation of A .

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Q1 (3) [/// mathongo](#) **Q2 (1)** [/// mathongo](#) **Q3 (1)** [/// mathongo](#) **Q4 (4)** [/// mathongo](#)

Q5 (4) [/// mathongo](#) **Q6 (4)** [/// mathongo](#) **Q7 (4)** [/// mathongo](#) **Q8 (4)** [/// mathongo](#)

Q9 (1) [/// mathongo](#) [/// mathongo](#) [/// mathongo](#) [/// mathongo](#) [/// mathongo](#) [/// mathongo](#)

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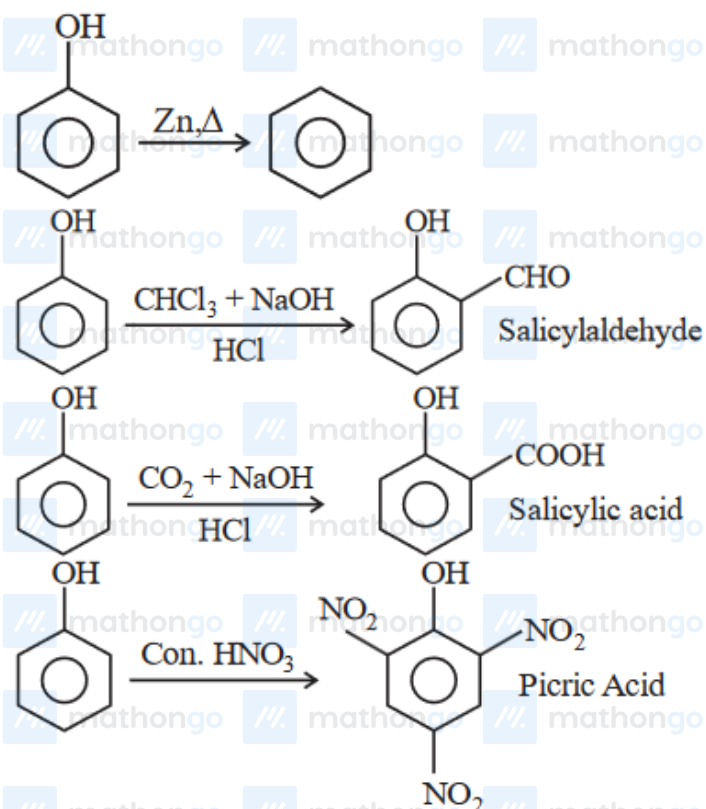
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Solutions

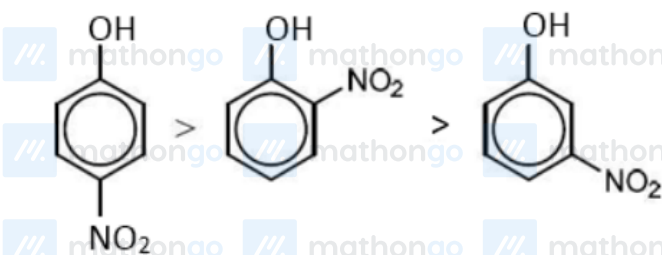
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Q1



Q2

Acidic strength



Ethanol give lucas test after long time

Statement (I) \rightarrow correctStatement (II) \rightarrow incorrect

Q3

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Solutions

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Carbylamine Test-Identification of primary amines Lucas Test - Differentiation between 1°, 2° and 3° alcohols

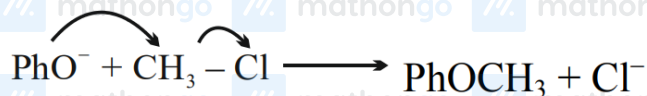
Tollen's Test - Identification of Aldehydes Phthalein Dye Test - Identification of phenols

Q4

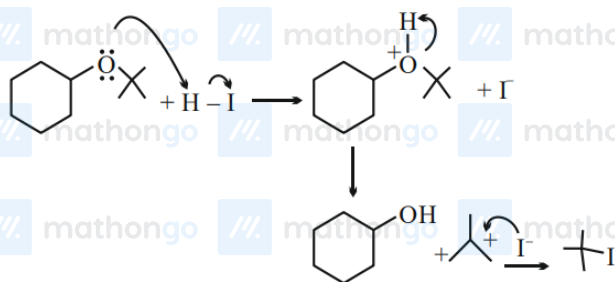
(A) → Kolbe Schmidt Reaction

(B) → Reimer Tiemann Reaction

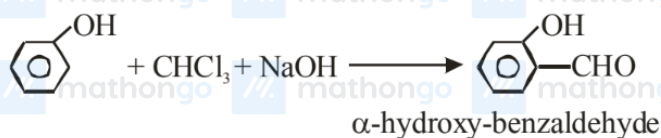
(C) → Oxidation of phenol to p-benzoquinone

(D) → $\text{PhOH} + \text{NaOH} \rightarrow \text{H}_2\text{O} + \text{PhO}^-$ 

Q5

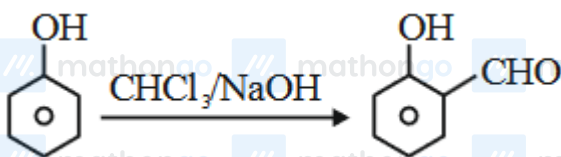


Q6



It is Reimer Tiemann Reaction

Q7



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Solutions

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Q8 mathongo mathongo mathongo mathongo mathongo mathongo

As per NCERT, Assertion (A) and Reason (R) is correct but Reason (R) is not the correct explanation.

Q9 mathongo mathongo mathongo mathongo mathongo mathongo

Phenol is more acidic than ethanol because conjugate base of phenoxide is more stable than ethoxide.

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