

PYQSide

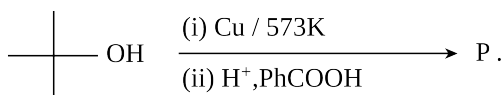
JEE MAIN ALCOHOLS, PHENOLS AND ETHERS — PYQS

Max. Marks: 72

Questions: 18

Section A (MCQ)

Q.1 Consider the following sequence of reactions



The major product P is:

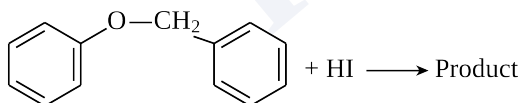
[JEE Main 2026 (Online) 6th April Morning Shift]

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

Scan or tap for the full solution



Q.2 Consider the following reaction.



Statement-I: In the above reaction, product formed will be a mixture of benzyl alcohol and iodobenzene.

Statement-II: In the above reaction, the $-\text{O}-\text{CH}_2-$ bond is cleaved to give the product.

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

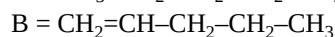
[JEE Main 2026 (Online) 6th April Evening Shift]

- (1) Both Statement-I and Statement-II are true
 (2) Both Statement-I and Statement-II are false
 (3) Statement-I is true but Statement-II is false
 (4) Statement-I is false but Statement-II is true

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Q.3 Consider compounds A, B and C with following structural formulae



For the conversion of B from A, reagent (D) required is _____ and structural formula of product (E) obtained when C undergoes same reaction using excess reagent (D) is _____.

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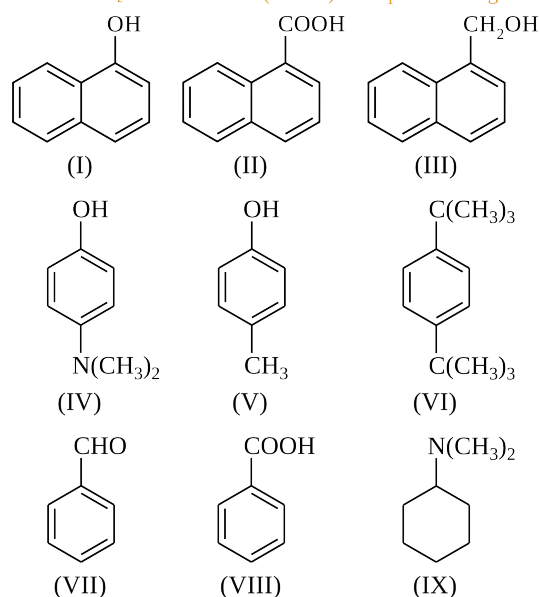
- (1) D: Conc. H_2SO_4 ; E: $\text{CH}_2=\text{CH}-\text{CH}(\text{OH})\text{CH}_3$
 (2) D: PCC; E: $\text{HO}-\text{CH}_2-\text{CH}_2-\text{CH}=\text{CH}_2$
 (3) D: PCC; E: $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$
 (4) D: Conc. H_2SO_4 or H_3PO_4 ; E: $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$

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Q.4 Amongst the following, the total number of compounds soluble in aqueous NaOH at room temperature is:

[JEE Main 2026 (Online) 4th April Morning Shift]

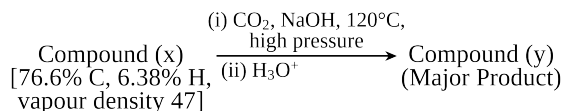


- (1) 5 (2) 4 (3) 6 (4) 3

Scan or tap for the full solution



Q.5 Consider the following reaction sequence :



Compound (y) develops characteristic colour with neutral FeCl_3 solution.

Identify the **INCORRECT** statement from the following for the above sequence.

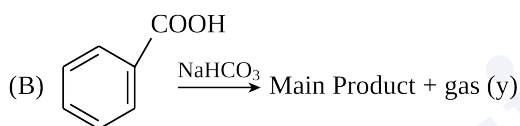
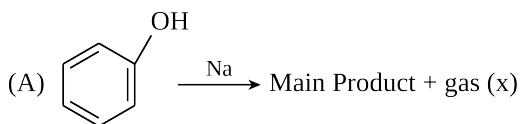
[JEE Main 2026 (Online) 28th January Morning Shift]

- (1) Compound y will dissolve in NaHCO_3 and evolve a gas.
- (2) Compound x is more acidic than compound y.
- (3) Both compounds x and y will dissolve in NaOH .
- (4) Both compounds x and y will burn with sooty flame.

Scan or tap for the full solution



Q.6 Consider the following two reactions A and B.



Numerical value of [molar mass of x + molar mass of y] is _____

[JEE Main 2026 (Online) 24th January Morning Shift]

- (1) 46 (2) 160 (3) 88 (4) 4

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Q.7 A hydroxy compound (X) with molar mass 122 g mol^{-1} is acetylated with acetic anhydride, using a large excess of the reagent ensuring complete acetylation of all hydroxyl groups. The product obtained has a molar mass of 290 g mol^{-1} . The number of hydroxyl groups present in compound (X) is:

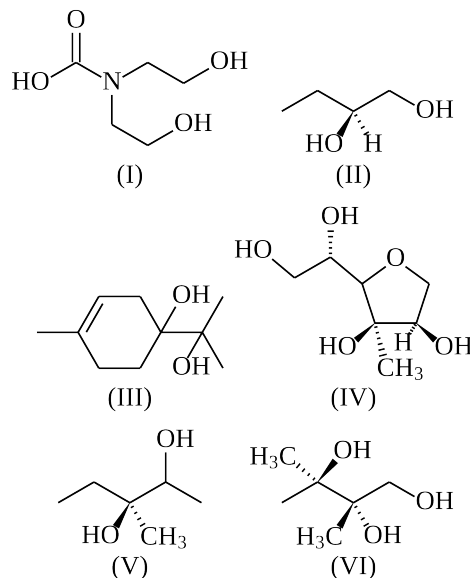
[JEE Main 2026 (Online) 24th January Morning Shift]

- (1) 2 (2) 4 (3) 3 (4) 5

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Q.8 From the following, how many compounds contain at least one secondary alcohol?



Choose the correct answer from the options given below :

[JEE Main 2026 (Online) 24th January Evening Shift]

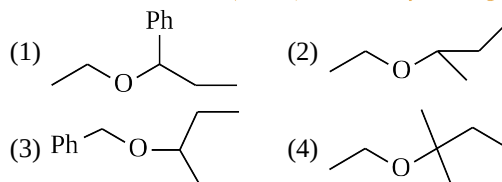
- (1) Three (2) Two (3) Four (4) Five

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Q.9 A mixed ether (P), when heated with excess of hot concentrated hydrogen iodide produces two different alkyl iodides which when treated with aq. NaOH give compounds (Q) and (R). Both (Q) and (R) give yellow precipitate with NaOI . Identify the mixed ether (P) :

[JEE Main 2026 (Online) 23rd January Evening Shift]



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Q.10 Given below are two statements :

Statement-I: Phenol on treatment with $\text{CHCl}_3/\text{aq. KOH}$ under refluxing condition, followed by acidification produces p-hydroxybenzaldehyde as the major product and o-hydroxybenzaldehyde as the minor product.

Statement-II: The mixture of p-hydroxybenzaldehyde and o-hydroxybenzaldehyde can be easily separated through steam distillation.

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

[JEE Main 2026 (Online) 22nd January Morning Shift]

- (1) Methanol; acetic acid; ethanol; diethyl ether
 (2) Ethanol; acetonitrile; ethylamine; ethylene
 (3) Methanol; formaldehyde; methyl chloride; chloroform
 (4) Acetaldehyde; 2-hydroxypropanoic acid; propanoic acid; dipropyl ether

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Section B (Numerical)

- Q.17** 4.7 g of phenol is heated with Zn to give product X. If this reaction goes to 60% completion then the number of moles of compound X formed will be _____ $\times 10^{-2}$. (Nearest Integer)
 (Given molar mass in g mol^{-1} : H:1, C:12, O:16)

[JEE Main 2026 (Online) 6th April Morning Shift]

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- Q.18** One mole of phenol is treated with dilute HNO_3 at 298 K to give a mixture of products. The mixture is separated by steam distillation. The steam volatile compound (X) is separated. The increase in percentage of oxygen in (X) with respect to phenol is _____ $\times 10^{-1}\%$
 (Given molar mass in g mol^{-1} : H : 1, C : 12, N : 14, O : 16)

[JEE Main 2026 (Online) 5th April Morning Shift]

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ANSWER KEY

Section A (MCQ)

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	3	4	4	1	2	1	2	1	2	4	1
Ques.	12	13	14	15	16						
Ans.	2	3	3	2	1						

Section B (Numerical)

Ques.	17	18					
Ans.	3	175					