

Questions with Answer Keys

MathonGo

Q1 (20 July 2021 Shift 1)

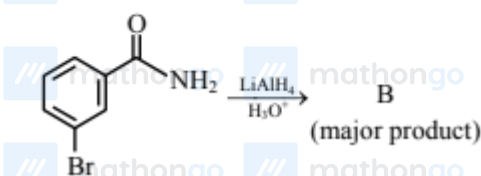
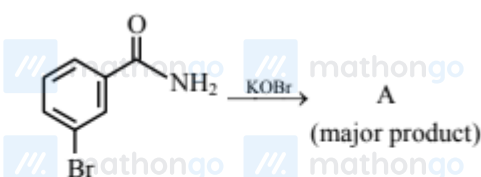
Compound A is converted to B on reaction with CHCl_3 and KOH . The compound B is toxic and can be decomposed by C. A, B and C respectively are :

- (1) primary amine, nitrile compound, conc. HCl
- (2) secondary amine, isonitrile compound, conc. NaOH
- (3) primary amine, isonitrile compound, conc. HCl
- (4) secondary amine, nitrile compound, conc. NaOH

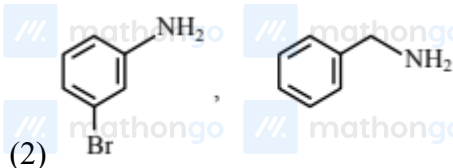
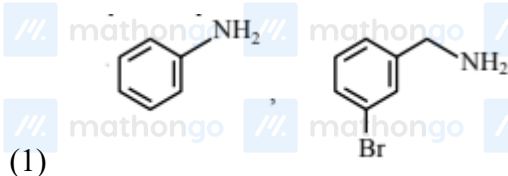
Q2 (20 July 2021 Shift 1)

The number of nitrogen atoms in a semicarbazone molecule of acetone is _____

Q3 (20 July 2021 Shift 2)



In the above reactions, product A and product B respectively are:



Questions with Answer Keys

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Q4 (20 July 2021 Shift 2)



Consider the above reaction, compound B is :

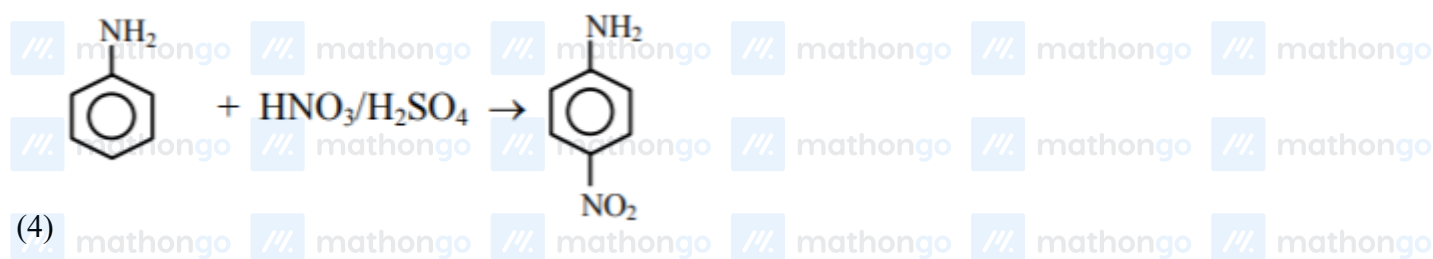
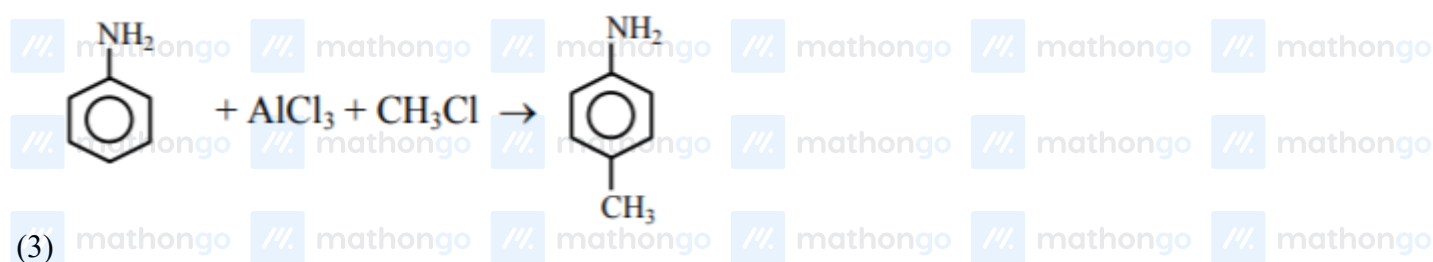
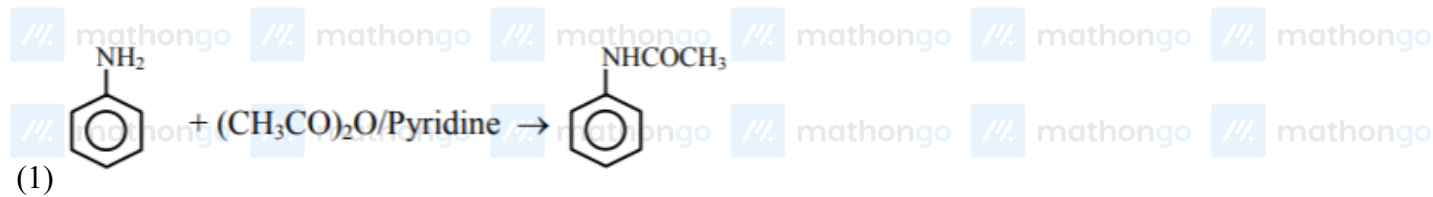


Q5 (22 July 2021 Shift 1)

Which one of the following reactions does not occur?

Questions with Answer Keys

MathonGo



Q6 (25 July 2021 Shift 1)

Given below are two statements, one is labelled as Assertion (A) and other is labelled as Reason (R).

Assertion (A) : Gabriel phthal imide synthesis cannot be used to prepare aromatic primary amines.

Reason : Aryl halides do not undergo nucleophilic substitution reaction.

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

(1) Both (A) and (R) true but (R) is not the correct

explanation of (A).

(2) (A) is false but (R) is true.

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

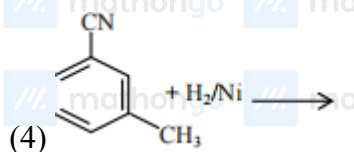
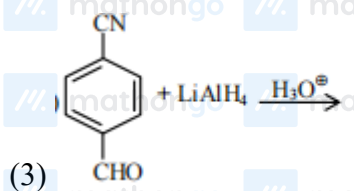
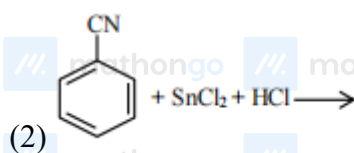
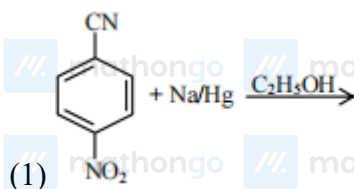
Questions with Answer Keys

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(4) (A) is true but (R) is false.

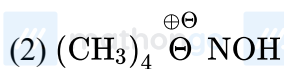
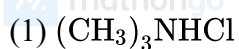
Q7 (25 July 2021 Shift 1)

Which one of the products of the following reactions does not react with Hinsberg reagent to form sulphonamide?



Q8 (25 July 2021 Shift 1)

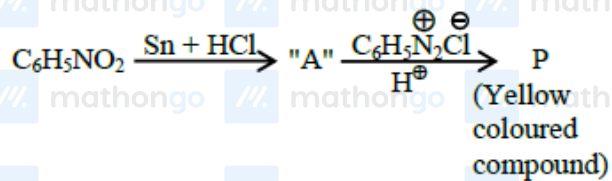
Which one of the following compounds will liberate CO₂, when treated with NaHCO₃?



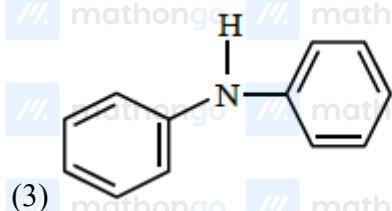
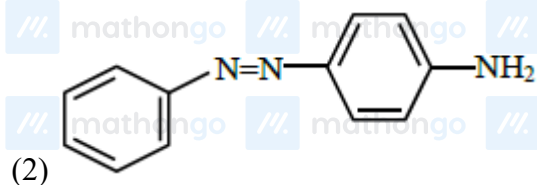
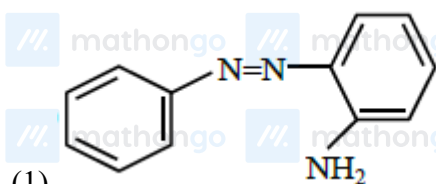
Q9 (25 July 2021 Shift 2)

Questions with Answer Keys

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Consider the above reaction, the Product "P" is :



Q10 (25 July 2021 Shift 2)

A reaction of benzonitrile with one equivalent CH_3MgBr followed by hydrolysis produces a yellow liquid

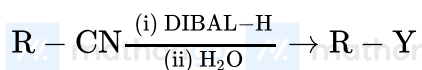
"P". The compound "P" will give positive

- (1) Iodoform test
- (2) Schiff's test
- (3) Ninhydrin's test
- (4) Tollen's test

Questions with Answer Keys

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Q11 (27 July 2021 Shift 2)



Consider the above reaction and identify "Y"

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

Questions with Answer Keys

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Answer Key

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Q1 (3)**Q2 (3)****Q3 (4)****Q4 (3)**

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Q5 (3)**Q6 (3)****Q7 (2)****Q8 (1)**

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Q9 (2)**Q10 (1)****Q11 (3)**

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#MathBoleTohMathonGo

Hints and Solutions

MathonGo

Q1

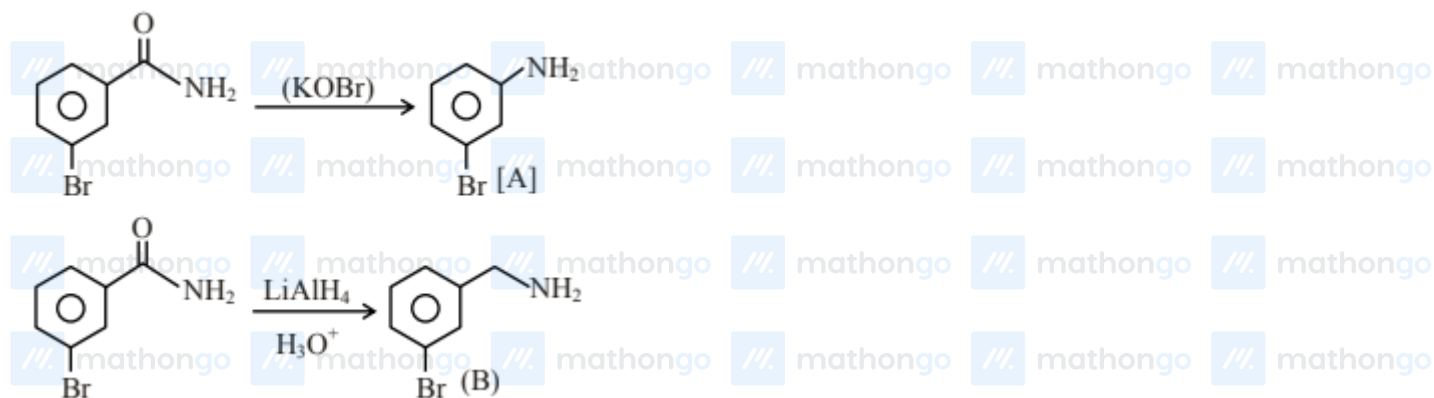


Q2



Semicarbazone molecule of acetone

Q3



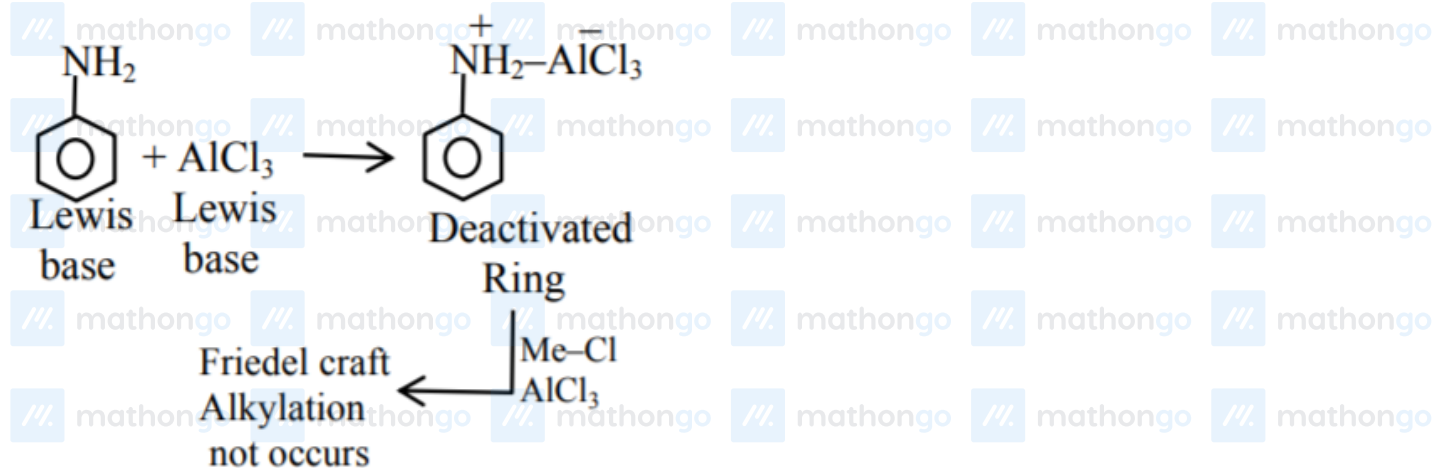
Q4

Hints and Solutions

MathonGo



Q5



(1) Aniline is lewis base give acid base reaction with AlCl_3 and form Anilinium ion

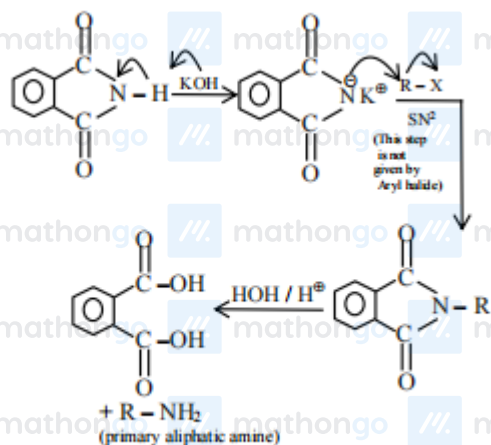
(2) Anilinium ion has strongest deactivated ring so further Friedel craft Alkylation not occurs.

Q6

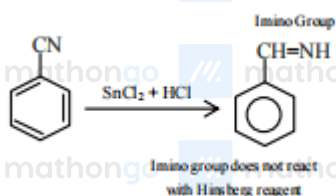
Hints and Solutions

MathonGo

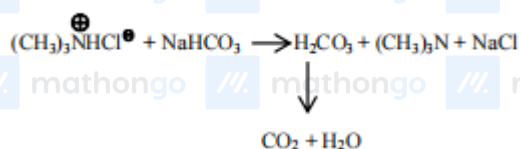
Gabriel phthalimide synthesis



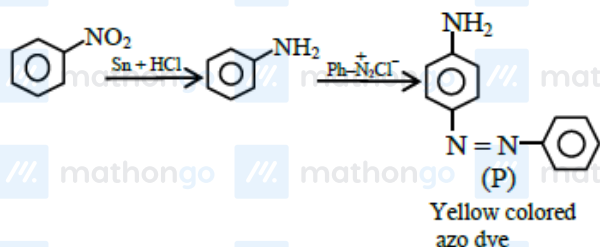
Q7



Q8



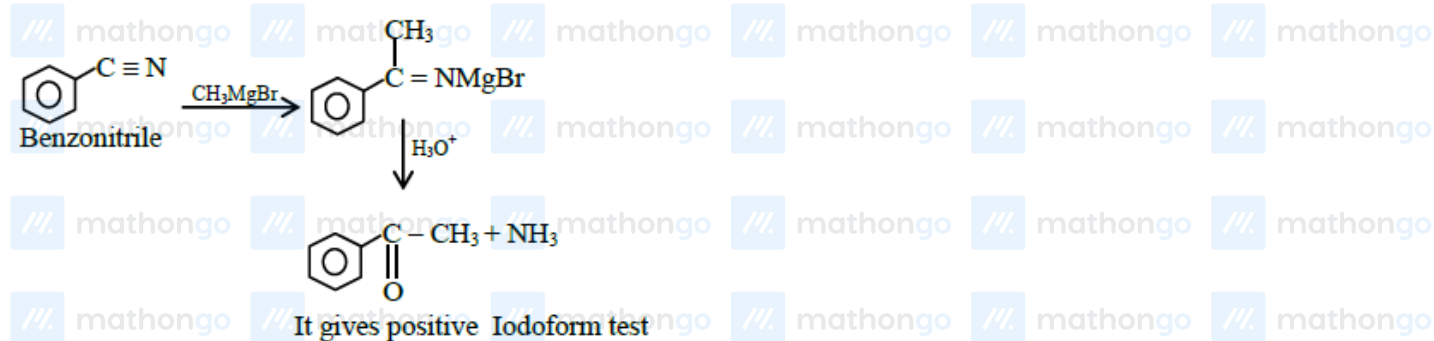
Q9



Q10

Hints and Solutions

MathonGo



Q11



Here Y is



Aldehyde