



CHEMISTRY

BOOKS - NCERT FINGERTIPS CHEMISTRY (HINGLISH)

AMINES

Mcqs

1. Nitrogen atom of amino group is __ hybridised.

A. sp

B. sp^2

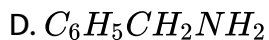
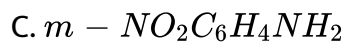
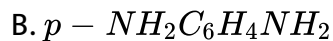
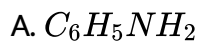
C. sp^3

D. sp^d

Answer:

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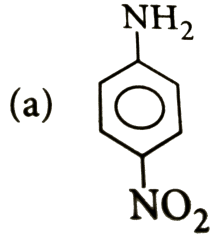
2. The strongest base among the following is



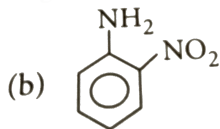
Answer:

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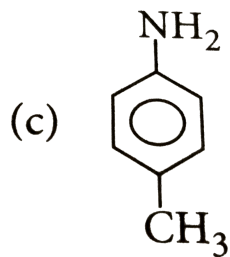
3. The most basic amine among the following is



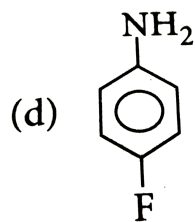
A.



B.



C.

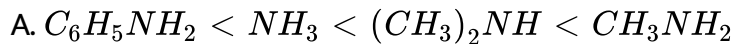


D.

Answer:

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4. Arrange the following compounds in increasing order of basicity:



Answer:



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5. Cyclohexylamine is stronger base than aniline because

A. in aniline electron pair is involved in conjugation

B. in cyclohexylamine electron pair is involved in conjugation

C. in aniline- NH_2 group is protonated

D. in cyclohexylamine nitrogen has a negative charge.

Answer:

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6. Which of the following amines will give carbylamine reaction?

A. $(C_2H_5)_3N$ Only

B. $(C_2H_5)_2NH$ only

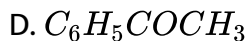
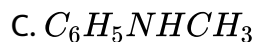
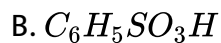
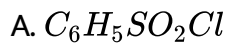
C. $C_2H_5NH_2$ only

D. $C_3H_7NHC_2H_5$ only

Answer:

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7. Which of the following is used as Hinsberg's reagent?



Answer:

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8. The reaction of benzenesulphonyl chloride with ethylamine yields

A. N-ethylbenzenesulphonamide, insoluble in alkali

B. N,N-diethylbenzenesulphonamide, soluble in alkali

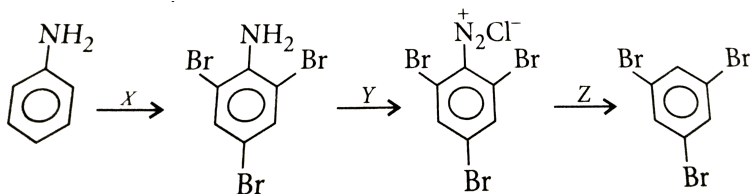
C. N,N-diethylbenzenesulphonamide, insoluble in alkali

D. N-ethylbenzenessulphonamide, soluble in alkali

Answer:

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9. Identify X,Y and Z in the given sequence of reactions



A. $X = \text{HBr}$, $Y = \text{NaNO}_2 + \text{HCl}$, $Z = \text{heat}$

B. $X = \text{Br}_2 / \text{CCl}_4$, $Y = \text{HNO}_2$, $Z = \text{CH}_3\text{OH}$

C. $X = \text{Br}_2 / \text{CuBr}$, $Y = \text{NaNO}_2 + \text{HCl}$, $Z = \text{NaOH}$

D.

$X = \text{Br}_2(\text{aq})$, $Y = \text{NaNO}_2 + \text{HCl}(0 - 4^\circ\text{C})$, $Z = \text{H}_3\text{PO}_2 + \text{H}_2\text{O}$

Answer:

10. Match the compounds given in column I with column II and mark the appropriate choice.

Column I		Column II	
(A)	Benzenesulphonyl chloride	(i)	Zwitter ion
(B)	Sulphanilic acid	(ii)	Hinsberg's reagent
(C)	Alkyldiazonium salts	(iii)	Dyes
(D)	Aryldiazonium salts	(iv)	Conversion to alcohols

A. (A) \rightarrow (iv), (B) \rightarrow (iii), (C) \rightarrow (i), (D) \rightarrow (ii)

B. (A) \rightarrow (ii), (B) \rightarrow (iv), (C) \rightarrow (iii), (D) \rightarrow (i)

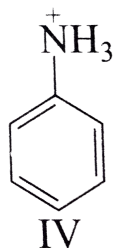
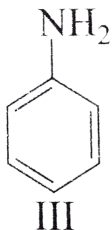
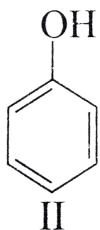
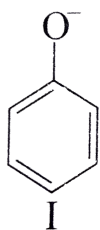
C. (A) \rightarrow (ii), (B) \rightarrow (i), (C) \rightarrow (iv), (D) \rightarrow (iii)

D. (A) \rightarrow (ii), (B) \rightarrow (iii), (C) \rightarrow (iv), (D) \rightarrow (i)

Answer:

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11. Coupling of diazonium salts of following takes place in the order



A. IV|III|II|I

B. IV|II|III|I

C. III|IV|II|I

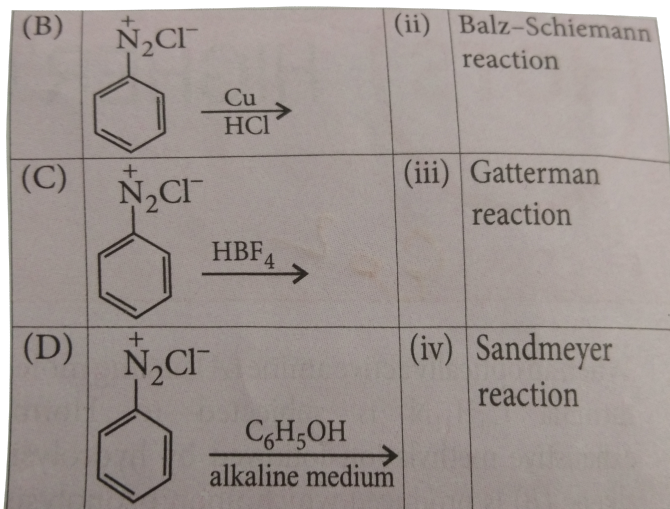
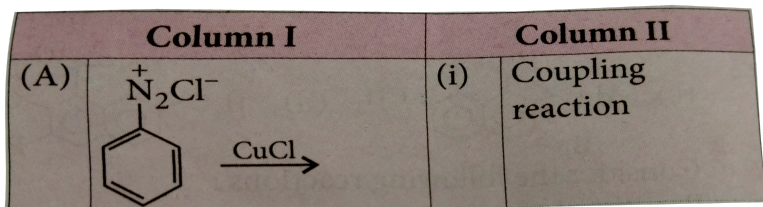
D. II|III|IIII|IV

Answer:



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12. Match the column I with column II and mark the appropriate choice.



A. (A) \rightarrow (iv), (B) \rightarrow (iii), (C) \rightarrow (ii), (D) \rightarrow (i)

B. (A) \rightarrow (iii), (B) \rightarrow (iv), (C) \rightarrow (i), (D) \rightarrow (ii)

C. (A) \rightarrow (ii), (B) \rightarrow (iii), (C) \rightarrow (iv), (D) \rightarrow (i)

D. (A) \rightarrow (i), (B) \rightarrow (ii), (C) \rightarrow (iii), (D) \rightarrow (iv)

Answer:

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Classification

1. C_3H_9N cannot represent

- A. 1° amine
- B. 2° amine
- C. 3° amine
- D. quaternary ammonium salt.

Answer:

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2. Which of the following is a primary amine .?

A. tert-Butylamine

B. sec-Butylamine

C. Isobutylamine

D. Dimethylamine

Answer:

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Preparation Of Amines

1. IUPAC name of the compound $(C_2H_5)_2NCH_3$ is

A. 2,2-diethylmethanamine

B. N,N-diethylmethanamine

C. N-ethyl-N-methylethanamine

D. N-methylbutanamine

Answer:

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2. Reduction of aromatic nitro compounds using Fe and HCl gives...

A. Aromatic primary amines

B. aromatic secondary amines

C. aromatic tertiary amines

D. aromatic amides.

Answer:

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3. Secondary amines could be prepared by

A. reduction of nitro compounds

B. reduction of amides

C. reduction of isonitriles

D. reduction of isonitriles

Answer: C::D

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4. Reduction of CH_3CH_2NC with hydrogen in presence of Ni or Pt as catalyst gives

A. $CH_3CH_2NH_2$

B. $CH_3CH_2NHCH_3$

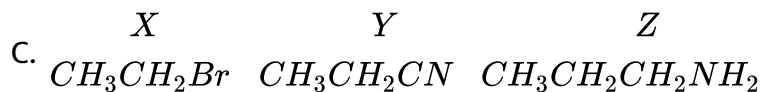
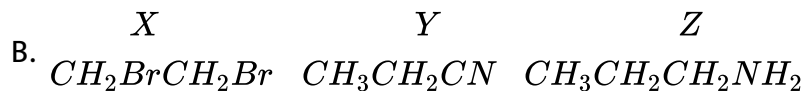
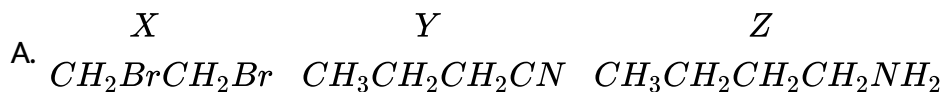
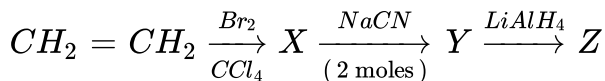
C. $CH_3CH_2NHCH_2CH_3$



Answer:

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5. Identify X, Y and Z in the given reaction:

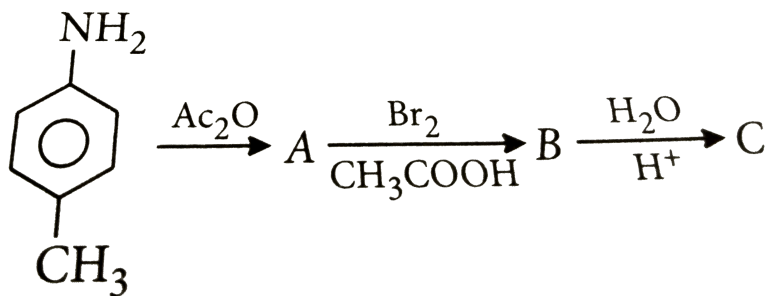


D.

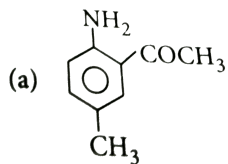


Answer:

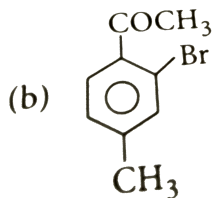
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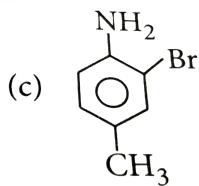
Product would be



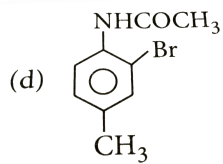
A.



B.



C.



Answer:

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2. Primary amines react with benzoyl chloride to give

- A. Benzamides
- B. ethanamides
- C. imides
- D. imines

Answer:

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3. what is obtained when benzoyl chloride reacts with aniline in the presence of sodium hydroxide?

- A. Benzoic acid
- B. Benzanilide
- C. Acetanilide
- D. Azobenzene

Answer:



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4. Acetylation of a secondary amine in alkaline medium yields

- A. N,N-dialkylacetamide
- B. N,N-dialkylamine
- C. N,N-dialkylamide
- D. acetyl dialkylamine

Answer:

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5. Primary and secondary amines react with acid chloride or acid anhydride to form

A. tertiaryammonium salts

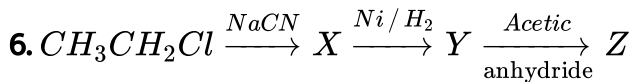
B. substituted amides

C. diazonium salts

D. nitro compounds

Answer:

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Z in the above reaction sequence is .

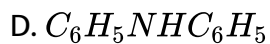
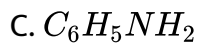
- A. $CH_3CH_2CH_2NHCOCH_3$
- B. $CH_3CH_2CH_2NH_2$
- C. $CH_3CH_2CH_2CONHCH_3$
- D. $CH_3CH_2CH_2CONHCOCH_3$

Answer:

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7. Which of the following compounds cannot be identified by carbyl amine test ?

- A. $CH_3CH_2NH_2$
- B. $(CH_3)_2CHNH_2$



Answer:

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8. The action of nitrous acid on an aliphatic primary amine gives

A. secondary amine

B. nitroalkane

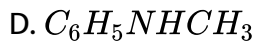
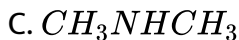
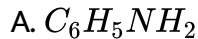
C. alcohol

D. alkyl nitrite

Answer:

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9. Which of the following compounds reacts with $NaNO_2$ and HCl at $0-4^\circ C$ to give alcohol/phenol?

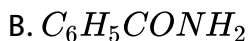
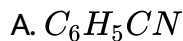
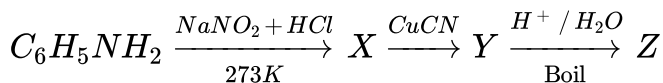


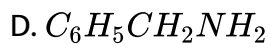
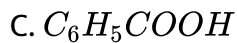
Answer:



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10. Identify 'Z' in the sequence

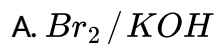




Answer:

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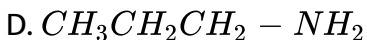
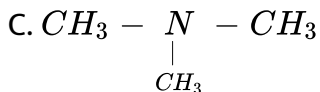
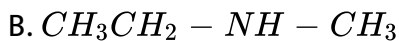
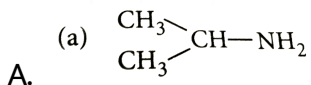
11. Primary and secondary amines are distinguished by:



Answer:

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12. An organic compound (C_3H_9N) (A) when treated with nitrous acid, gave an alcohol and N_2 gas was evolved. (A) on warming with $CHCl_3$ and caustic potash gave (C) which on reduction gave isopropylmethylamine. Predict the structure of (A).



Answer:



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13. Match the column I with column II and mark the appropriate choice.

Column I		Column II	
(A)	$\text{CH}_3\text{NH}_2 + \text{CHCl}_3 + \text{KOH} \xrightarrow{\Delta}$	(i)	CH_3NH_2
(B)	$\text{CH}_3\text{CONH}_2 + \text{Br}_2 + \text{KOH} \longrightarrow$	(ii)	CH_3OH
(C)	$\text{CH}_3\text{NH}_2 + \text{NaNO}_2 + \text{HCl} \longrightarrow$	(iii)	CH_3NHCH_3
(D)	$\text{CH}_3\text{NC} + 4\text{H} \xrightarrow{\text{Pt}}$	(iv)	CH_3NC

A. (A) \rightarrow (i), (B) \rightarrow (ii), (C) \rightarrow (iii), (D) \rightarrow (iv)

B. (A) \rightarrow (ii), (B) \rightarrow (iii), (C) \rightarrow (iv), (D) \rightarrow (i)

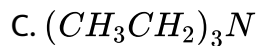
C. (A) \rightarrow (iv), (B) \rightarrow (i), (C) \rightarrow (ii), (D) \rightarrow (iii)

D. (A) \rightarrow (iii), (B) \rightarrow (iv), (C) \rightarrow (i), (D) \rightarrow (ii)

Answer:

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14. Which of the following amine does not react with Hinsberg's reagent ?

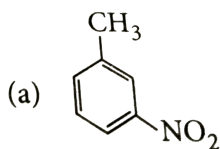
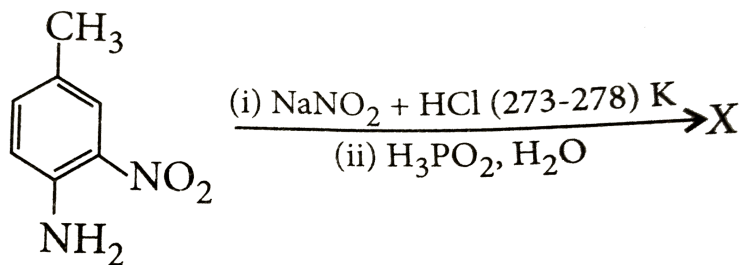


D. All of these

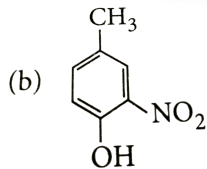
Answer:

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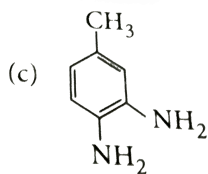
15. The structure of product X in the following reaction is



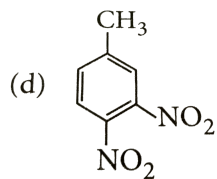
A.



B.



C.

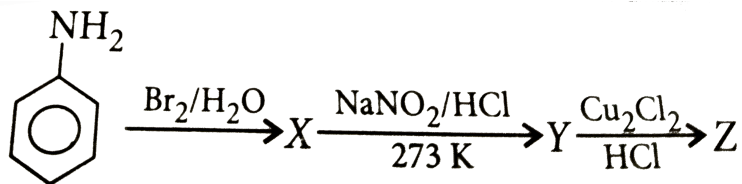


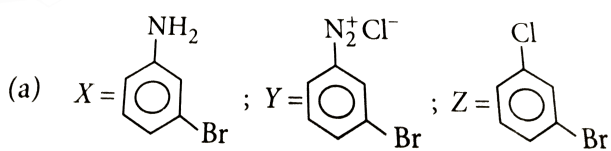
D.

Answer:

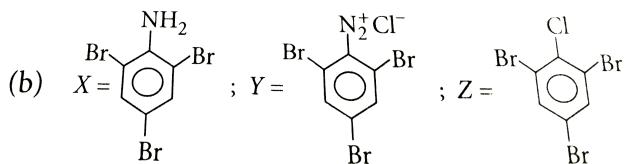
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16. Identify X, Y and Z in the given sequence of reactions.

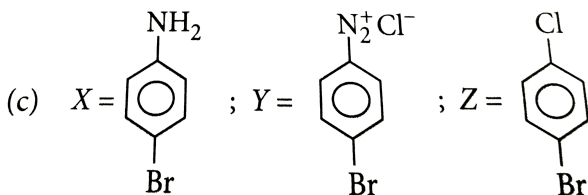




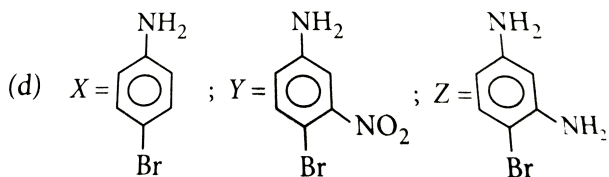
A.



B.



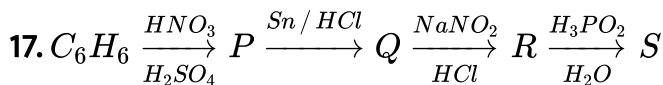
C.



D.

Answer:

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The end product S in the given sequence of reactions is

A. Benzoic acid

B. benzene

C. phenol

D. chlorobenzene.

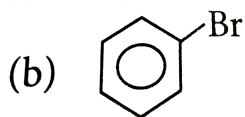
Answer:

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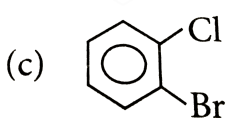
18. o-Chloroaniline is treated with a mixture of $NaNO_2$ and HCl and the product is reacted with cuprous bromide. The final product in the reaction will be



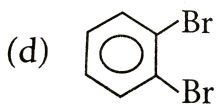
A.



B.



C.

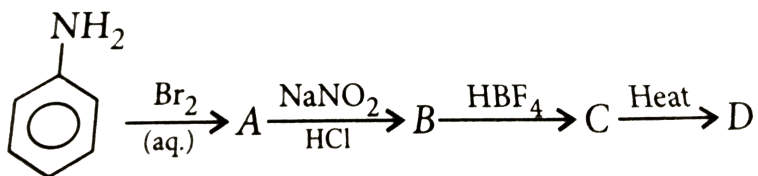


D.

Answer:

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19. The product 'D' in the following sequence of reactions is



A. 2,4,6-tribromofluorobenzene

B. fluorobenzene

C. p-bromofluorobenzene

D. tribromobenzene

Answer:

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Ncert Exemplar

1. Which of the following is a 3° amine

A. 1- Methylcyclohexylamine

B. Triethylamine

C. tert-butyl amine

D. N-Methylaniline

Answer:

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2. The correct IUPAC name for $CH_2 = CHCH_2NHCH_3$ is

- A. allylmethylamine
- B. 2-aminon -4- pentene
- C. 4- aminopent - 1 - ene
- D. N- methylprop- 2- en - 1 - amine

Answer:



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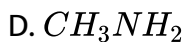
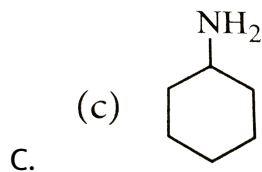
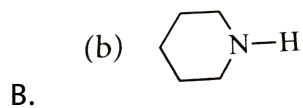
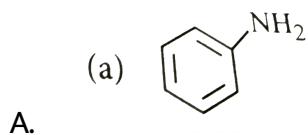
3. Amongst the following, the strongest base in aqueous medium is

- A. CH_3NH_2
- B. $NCCH_2NH_2$
- C. $(CH_3)_2NH$
- D. $C_6H_5NHCH_3$

Answer:

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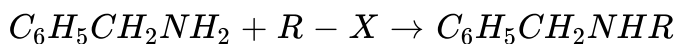
4. Which of the following is the weakest Bronsted base?



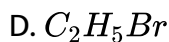
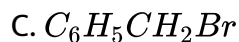
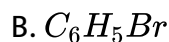
Answer:

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5. Benzylamine may be alkylated as shown in the following equation



Which of the following alkyl halides is best suited for this reaction through S_N1 mechanism?



Answer:

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6. Which of the following reagents would not be a good choice for reducing an aryl nitro compound to an amine?



B. $LiAlH_4$ in ether

C. Fe and HCl

D. Sn and HCl

Answer:

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7. In order to prepare a 1° amine from an alkyl halide with simultaneous addition of one CH_2 group in the carbon chain, the reagent used as source of nitrogen is.....

A. sodium amine, $NaNH_2$

B. sodium azide, NaN_3

C. potassium cyanide, KCN

D. potassium phthalimide, $C_6H_4(CO)_2N^- K^+$

Answer:



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8. The source of nitrogen in Gabriel synthesis of amine is..

A. sodium azide, NaN_3

B. sodium nitrite, $NaNO_2$

C. potassium cyanide, KCN

D. potassium phthalimide, $C_6H_4(CO)_2N^- K^+$

Answer:



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9. Amongst the given set of reactants, the most appropriate for preparing 2° amine is

A. $2^\circ R - Br + NH_3$

B. $2^\circ R - Br + NaCN$ followed by H_2 / Pt

C. $1^\circ R - NH_2 + RCHO$ followed by H_2 / Pt

D. $1^\circ R - Br(2 \text{ mol}) + \text{potassium phthalimide}$ followed by

H_3O^+ / heat

Answer:

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10. The best reagent for converting 2-phenylpropanamide into 2-phenylpropanamine is

A. excess H_2

B. Br_2 in aqueous NaOH

C. iodine in the presence of red phosphorus

D. $LiAlH_4$ in ether.

Answer:

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11. The best reagent for converting, 2-phenylpropanamide into 1-phenylethanamine is....

A. excess H_2 / Pt

B. $NaOH / Br_2$

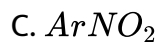
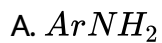
C. $NaBH_4$. Methanol

D. $LiAlH_4$ / ether

Answer:

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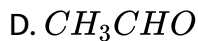
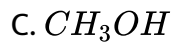
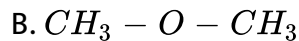
12. Hoffmann bromamide degradation reaction is shown by _____



Answer:

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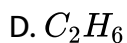
13. Methylamine reacts with HNO_2 to form....



Answer:

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14. The gas evolved when methylamine reacts with nitrous acid is....



Answer:

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15. In the nitration of benzene using a mixture of conc. H_2SO_4 and conc. HNO_3 , the species which initiates the reaction is...





Answer:

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16. Reduction of aromatic nitro compounds using Fe and HCl gives...

A. aromatic oxime

B. aromatic hydrocarbon

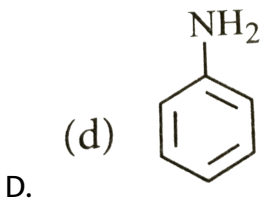
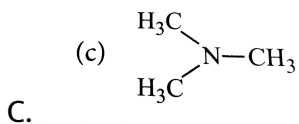
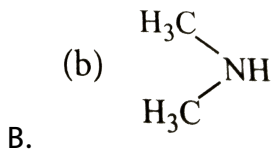
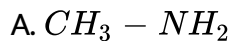
C. aromatic primary amine

D. aromatic amide.

Answer:

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17. The most reactive amine towards dilute hydrochloric acid is



Answer:

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18. Acid anhydrides on reaction with primary amine gives...

A. amide

B. imide

C. secondary amine

D. imine.

Answer:

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19. The reaction $Ar\overset{+}{N}_2Cl \xrightarrow{Cu/HCl} ArCl + N_2 + CuCl$ is named as....

A. Sandmeyer reaction

B. Gatterman reaction

C. Claisen reaction

D. Carbylamine reaction

Answer:

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20. Best method for preparing primary amines from alkyl halides without changing the number of carbon atoms in the chain is

- A. Hofmann bromamide reaction
- B. Gabriel phthalimide synthesis
- C. Sandmeyer reaction
- D. Reaction with NH_3

Answer:



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21. Which of the following compounds will not undergo azo coupling reaction with benzene diazonium chloride?

- A. Aniline
- B. Phenol

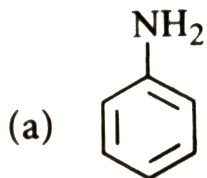
C. Anisole

D. Nitrobenzene

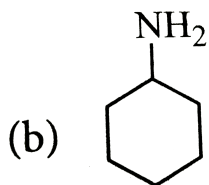
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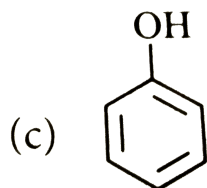
22. Which of the following compounds is the weakest Bronsted base?



A.



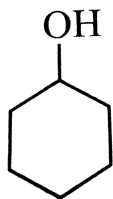
B.



C.

D.

(d)



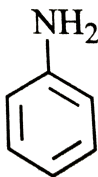
Answer:

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23. Among the following amines, the strongest Bronsted base is....

A.

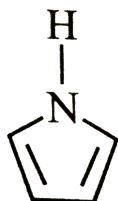
(a)



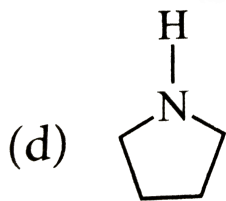
B. NH_3

C.

(c)



D.



Answer:

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24. Which of the following methods of preparing of amines will give same number of carbon atoms in the chain of amines as in the reactant?

A. Reaction of nitrite with $LiAlH_4$.

B. Reaction of amide with $LiAlH_4$ followed by treatment with water.

C. Heating alkyl halide with potassium salt of phthalimide followed by hydrolysis.

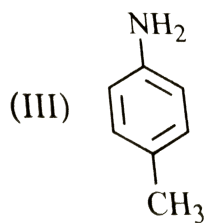
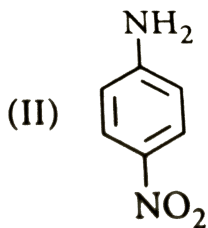
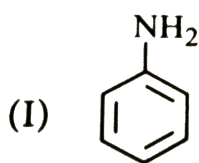
D. Treatment of amide with bromine in aqueous solution of sodium hydroxide.

Answer:

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Ncert Exemplar Problems

1. The correct increasing order of basic strength for the following compounds is _____ .



A. $II < III < I$

B. $III < I < II$

C. $III < II < I$

D. $II < I < III$

Answer:



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