



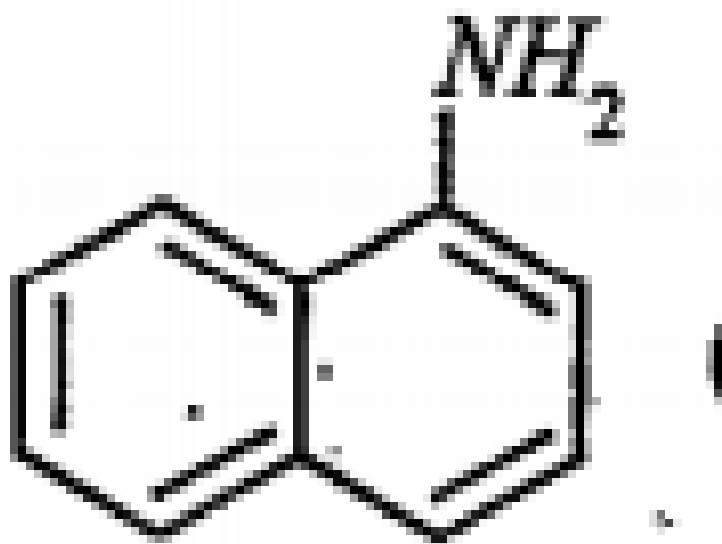
CHEMISTRY

BOOKS - A N EXCEL PUBLICATION

AMINES

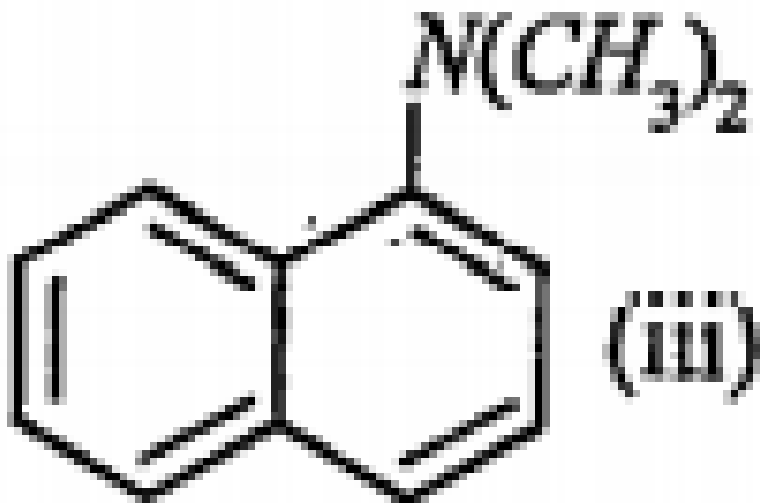
Question Bank

1. Classify the following amines as 1° , 2° and 3°



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2. Classify the following amines as 1° , 2° and 3°



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3. Classify the following amines as 1° , 2° and 3°





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4. Classify the following amines as 1° , 2° and 3°



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5. Write the structures of different isomeric amines corresponding to the molecular formula



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6. Write the IUPAC names of all the isomers in molecular formula $C_4H_{11}N$



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7. What type of Isomerism is exhibited by different pairs of amines in molecular formula $C_4H_{11}N$.



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8. How will you convert: Benzene into aniline?



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9. How will you convert: Benzene to N,N-dimethyl aniline?



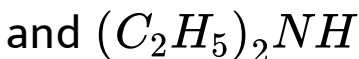
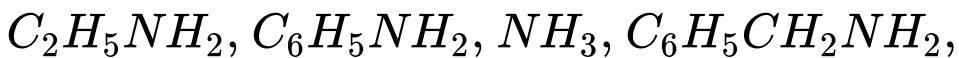
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10. How will you convert: $Cl - (CH_2)_4 - Cl$ into hexane-1, 6-diamine?



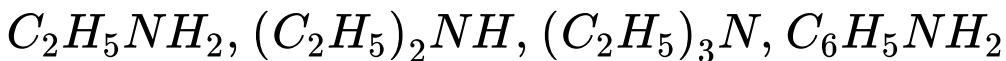
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11. Arrange the following in increasing order of basic strength:



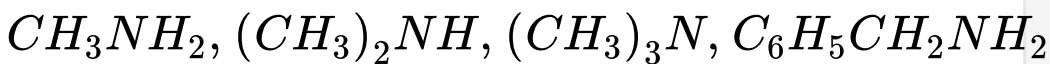
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12. Arrange the following in increasing order of basic strength:



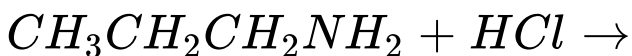
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13. Arrange the following in increasing order of basic strength:



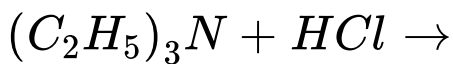
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14. Complete the following acid-base reactions and name the products



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15. Complete the following acid-base reactions and name the products



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16. Write reactions of the final alkylation product of aniline with excess methyl iodide in the presence of sodium carbonate solution.



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17. Write chemical reaction of aniline with benzoyl chloride and write the name of the product obtained.



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18. Write structures of different isomers corresponding to the molecular formula C_3H_9N . Write IUPAC names of the isomers which will liberate nitrogen gas on treatment with nitrous acid.



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19. Convert: 3-Methylaniline into 3-nitrotoluene



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20. Convert: Aniline into 1,3,5-tribromobenzene



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21. Aromatic amines are important synthetic intermediates.

What are the products obtained when aniline is treated with bromine water?



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22. Aromatic amines are important synthetic intermediates.

How will you convert nitrobenzene to aniline?



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23. Aromatic amines are important synthetic intermediates.

Write down the isocyanide test for the primary amines.



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24. Benzene sulphonyl chloride and aqueous NaOH can be used to distinguish three classes of amines such as primary, secondary and tertiary

Name the above test



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25. Benzene sulphonyl chloride and aqueous NaOH can be used to distinguish three classes of amines such as primary, secondary and tertiary

Name the above test



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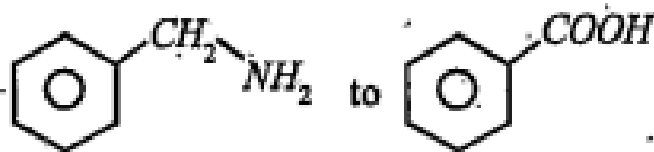
26. Primary, secondary and tertiary amines can be distinguished using Hinsberg's reagent.

How will you distinguish Primary, secondary and tertiary amines using Hinsberg's reagent?

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27. Amines are versatile functional groups useful in the preparation of many organic compounds.

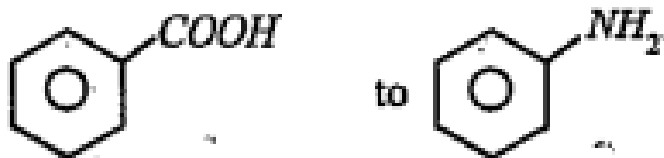
How can you convert.



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28. Amines are versatile functional groups useful in the preparation of many organic compounds.

How can you convert.



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29. A student try to prepare p-nitroaniline by nitrating aniline with con. $\text{HNO}_3 - \text{con. H}_2\text{SO}_4$ mixture but he got m-nitroaniline from aniline. Why?



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30. Explain how he should proceed to get p-nitroaniline from aniline.



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31. Aniline is an aromatic primary amine. Starting from aniline a number of organic compounds can be prepared.

How is aniline converted to benzenediazonium chloride?



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32. How are the following obtained from benzenediazonium chloride?

Chlorobenzene



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33. How are the following obtained from benzenediazonium chloride?

Phenol



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34. Primary, secondary and tertiary amines can be distinguished using Hinsberg's reagent.

What is Hinsberg's reagent?



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35. Primary, secondary and tertiary amines can be distinguished using Hinsberg's reagent.

How will you distinguish Primary, secondary and tertiary amines using Hinsberg's reagent?



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36. Carbylamines have an offensive smell.

Write the carbylamine reaction.



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37. Carbylamines have an offensive smell.

How will you convert aniline into phenol?



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38. How will you convert an amide into following?

An amine with one carbon atom less than that of the amide.

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39. How will you convert an amide into following?

An amine containing the same number of carbon atoms as that in the amide.

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40. Aromatic and aliphatic amines are basic in nature like ammonia. Arrange the following compounds in the increasing order of their basic strength:



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41. How will you convert aniline ($C_6H_5NH_2$) to chlorobenzene?



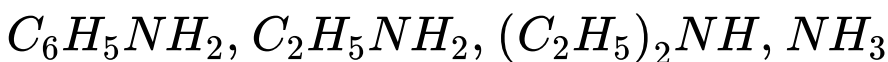
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42. Amines can be considered as derivatives of ammonia.

Arrange the following in increasing order of their basic strength.



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43. Amines can be considered as derivatives of ammonia.

Represent a reaction to explain the basic character of aniline.



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44. Amines can be considered as derivatives of ammonia.

Name the reagents used in the Hoffmann's bromamide reaction.



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45. Amines can be considered as derivatives of ammonia.

What is the significance of the Hoffmann bromamide reaction?



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46. Amines can be considered as derivatives of ammonia.

Give one chemical test to distinguish between methyl amine and dimethyl amine. Write down the chemical reaction.



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47. Write a method of preparation of primary amines.



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48. Give a chemical reaction given only by primary amines.



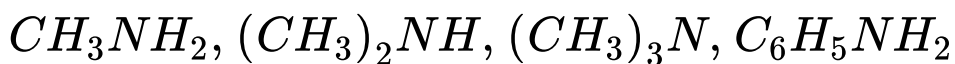
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49. What is diazotisation?



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50. Amines are basic. Arrange the following amines in the increasing order of base strength:



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51. Two well known reactionare given below:

Suggest the main product of each reaction. Also

give the name of each reaction.

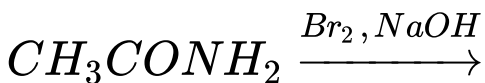


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52. Two well known reactionare given below:

Suggest the main product of each reaction. Also

give the name of each reaction.



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53. Amines are classified as primary, secondary and tertiary

Write the IUPAC name of the following compound: $NH_2 - (CH_2)_6 - NH_2$



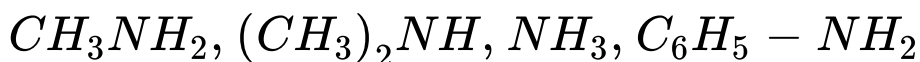
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54. Which is stronger base-
 CH_3NH_2 or $C_6H_5NH_2$? Why?



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55. Aromatic and aliphatic amines are basic in nature like ammonia. Arrange the following compounds in the increasing order of their basic strength:



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56. How will you carry out the following reaction?

Hoffmann bromamide reaction



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57. Carbylamines have an offensive smell.

Write the carbylamine reaction.



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58. Amines are classified as primary, secondary and tertiary amine.

represent the structure of secondary and tertiary amine.



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59. Aromatic amines are important synthetic intermediates.

How will you convert nitrobenzene to aniline?



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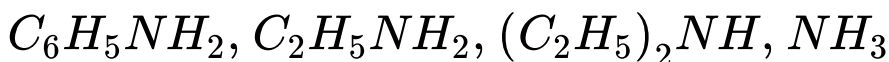
60. Aniline does not undergo Friedel-Crafts reaction. Why?



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61. Amines can be considered as derivatives of ammonia.

Arrange the following in increasing order of their basic strength.



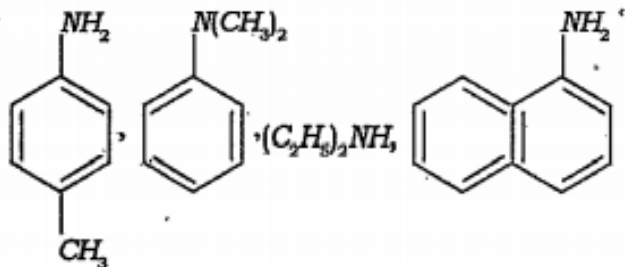
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62. How will you convert aniline ($C_6H_5NH_2$) to chlorobenzene?



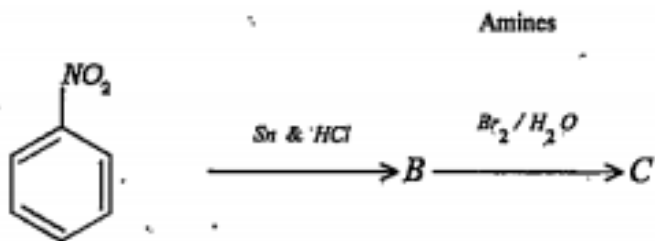
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63. Classify the following amines as primary, secondary and tertiary.



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64..



Identify the products B and C and write their formulae.



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65. The most basic compound among the following is



Answer: D



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66. Compound A is treated with ethanolic NaCN to give the compound C_2H_5CN (B) compound B on reduction gives compound C. identify compounds A and C.



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67. Gabriel's phthalimide synthesis is used to prepare certain types of amines.

Which type of amines are prepared by Gabriel synthesis?



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68. Gabriel's phthalimide synthesis is used to prepare certain types of amines

Can you prepare aniline by this method?

Explain.



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69. Gabriel's phthalimide synthesis is used to prepare certain types of amines

What is carbylamine reaction ?



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70. Benzamide ($C_6H_5CONH_2$) on heating with bromine and NaOH gave a compound A which is soluble in dilute acid. When A is warmed with chloroform and alc KOH, B is formed which has

an unpleasant odour.

Illustrate the reaction for the formation of A from benzamide and write the name of A.

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71. Benzamide ($C_6H_5CONH_2$) on heating with bromine and NaOH gave a compound A which is soluble in dilute acid. When A is warmed with chloroform and alc KOH, B is formed which has an unpleasant odour.

What is reaction called as?

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72. Benzamide ($C_6H_5CONH_2$) on heating with bromine and NaOH gave a compound A which is soluble in dilute acid. When A is warmed with chloroform and alc KOH, B is formed which has an unpleasant odour.

Using chemical equation represent the formation of B from A.

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73. Benzamide ($C_6H_5CONH_2$) on heating with bromine and NaOH gave a compound A which is soluble in dilute acid. When A is warmed with chloroform and alc KOH, B is formed which has an unpleasant odour.

What is reaction called as?



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74. Arylamines are used for the preparation of a number of aromatic compounds.

Why is aniline less basic than ammonia?



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75. Arylamines are used for the preparation of a number of aromatic compounds.

Starting from aniline how would you prepare.

Bromobenzene



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76. Arylamines are used for the preparation of a number of aromatic compounds.

Starting from aniline how would you prepare.

Iodobenzene



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77. Arylamines are used for the preparation of a number of aromatic compounds.

Starting from aniline how would you prepare.

Benzene



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78. Complete the following table by writing the name of the reagent, organic products and name of the reaction wherever required.

<i>Sl. No.</i>	<i>Reactant</i>	<i>Reagents</i>	<i>Organic product</i>	<i>Name of reaction</i>
1.	$C_6H_5CONH_2$	-----	$C_6H_5NH_2$	-----
2.	$C_6H_5NH_2$	$C_6H_5COCl/NaOH$	-----	-----
3.	$CH_3CH_2NH_2$	-----	CH_3CH_2NC	-----
4.	$C_6H_5N_2Cl$	$C_6H_5NH_2$	-----	-----
5.	$C_6H_5N_2Cl$	Cu/HBr	-----	-----



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79. A student said that carbylamine reaction can be used to distinguish between aniline and

ethylamine.

Do you agree with this?



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80. A student said that carbylamine reaction can be used to distinguish between aniline and ethylamine

If not, suggest another test to distinguish between the two.



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81. What will be the product obtained if diazotisation of aniline is carried out at room temperature?



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82. Aryl diazonium salts are very good synthetic reagents that can be used for the preparation of a wide variety of organic compounds. Why are aryl diazonium ions more stable than alkyl diazonium ions?



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83. Aryl diazonium salts are very good synthetic reagents that can be used for the preparation of a wide variety of organic compounds

What is coupling reaction? Give one example.



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