

CHEMISTRY

BOOKS - MODERN PUBLICATION

ORGANIC CHEMISTRY



1. Match the following columns

- 1. Match the diseases of Group (A) with the vitamins Group (B) correctly. [2019(A) Group (A) Group (B)
 - (a) Xerophthalmia (i) Vitamin
 - (b) Scurvy (ii) Vitamin K
 - . (c) Coagulation (iii) Vitamin A. of blood
 - (d) Rickets. (iv) Vitamin C



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2. How can you convert ethanol to ethene?



3. What are tranquilizers? Give two examples.



4. What happens when calcium açetate is dry distilled?



5. What are antibiotics? Writedown the name of two antibiotics.

6. What is Benzoin condensation? Give name of the product and also give equation.



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7. Identify A and B in the following reaction.

$$C_6H_5$$
- CH_2 - $CHBr$ - $CH_3 \xrightarrow{alc.KOH} A \xrightarrow{HBr} B$

$$[2017(A)]$$



8. Explain Carbylamine reaction.



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9. How is toluene converted to benzene?



10. Match the following columns

- 10. Correctly match List-I with List II:
 - List I Terylene Α.
- 1. Insecticide

List - II

1

- R. Insulin
- 2. Lipid
- C. Lecithin
- 3. Hormone
- D. Lindane
- 4. Polymer
- 5. Carbohydrate
- [2016 (A)



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11. What is Cannizzaro's reaction? Give equation.





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13. Write the chemical test to distinguish between formic acid and acetic acid.



14. Identify A,B,C and D:

$$C_6H_5COOH \xrightarrow{PCl_5} A \xrightarrow{Pd/BaSO_4S} B \xrightarrow{conc.} C+D$$

$$\xrightarrow{H_2} Boiling \ xylene$$



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15. Identify X, Y and Z and name the reaction.

$$C_6H_5NH_2+CHCl_3+3KOH o X+Y+Z$$



16. What are antiseptics? Give three names of antiseptics.



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17. Match the following columns

17. Correctly match List – I with List –II:

List - I

List $-\Pi$

- A. Crocin 1. Polymer
- B. Surf
- 2. Rhodenticide
- C. Bakelite
- 3. Antipyretic

- *D. Zinc phosphide 4. Detergent
 - 5. Insecticide

[2014 (A)



18. How Benzene can be converted to Benzoic acid?



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19. Explain - why methylamine is a stronger base than aniline ?



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20. How does Tollens reagent react with formic acid? Explain with equation.



21. How will you convert aniline to chlorobenzene?



22. How can convert benzene to benzoic acid?



23. What are soaps and detergents?



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24. What is Rosenmund reduction reaction?



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25. What is Rosenmund reduction reaction?



26. Write the structural formulae of the three derivatives of monocarboxylic acid. Identify the functional group present in them.



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27. "Direct iodination of benzene is difficult." Explain. Suggest an alternative route for the synthesis of iodo benzene.



28. What are essential and nonessential amino acids? Give two examples of essential amino acids.



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29. How is benzene converted to toluene?



30. What is the action of benzaldehyde with HCN?

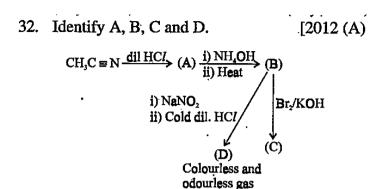


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31. What happens when ethyl acetate is treated with sodium ethoxide and ethyl alcohol? Give equation.



32. Identify A, B, C and D.





33. What happens when propionic acid is treated with thionyl chloride?



34. What is Reimer-Tiemann reaction?



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35. Suggest two tests to distinguish between ethanol and phenol.



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36. How is methylamine converted to trimethyl amine?

37. How is acetaldehyde converted to acetone



38. An organic compound having molecular formula C_3H_7Br on treatment with aqueous KOH solution gave the compound (A). When the vapour of the compound (A) was passed

over red hot copper at $300\,^{\circ}\,C$ compound (B) was formed. The compound (B) on treatment with l_2 and dil. NaOH, formed a yellow solid (C). Identify the compounds A,B and C.



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39. Discuss Reimer-Tiemann reaction.



40. Elucidate the differences between soaps and detergents.



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41. Answer the following

What do you mean by biodegradale and non-biodegradable polymers? Give an example of a synthetic biodegradable polymer.



42. What are antioxidants? Give two examples.



43. Why phenol is acidic in nature?



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44. Explain the Hofnann bromamide reaction with one example.



45. What are addition and condensation polymerisation? Give one example of each.



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46. Explain the amphoteric behaviour of amino acids.



47. Complete the following reaction and write the names of A and B.

$$\begin{array}{|c|c|c|}
\hline
 & CO \\
\hline
 & CO \\
\hline
 & NH & NaOH \\
\hline
 & A & Br2/KOH \\
\hline
 & B \\
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 & B \\
 & B \\$$



48. What is Stephen reduction reaction? Give an example.



49. How is benzoic acid converted to benzaldehyde?



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50. A compound 'A' having molecular formula $C_2H_5O_2N$, on reaction with Sn and conc. HCl gives a compound B which when treated with $NaNO_2$ and dil. HCl gave compound C having molecular formula C_2H_6O . The compound C when treated with Na metal give effervescenes

and when reacts with CrO_3 give a saturated aldehyde having 2 carbon atoms. Determine the structures and names of A, B and C along with the sequence of reactions.



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51. How do you prepare benzoic acid from n-propyl benzene



52. What is Schmidt reaction ? Write the structure of the product of this reaction .



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53. Do the conversion: Benzene to m-dichlorobenzene



54. Suggest a chemical test to distinguish between pentan-2-one and pentan-3-one. Give equation.



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55. Identity A, B, C and name the reaction involved in the transformation of B and C.

$$CH_{3}-C-NH_{2}\xrightarrow{\text{Heat}} [A] \xrightarrow{\text{LiAIH}_{4}} [B]$$

$$O \qquad \qquad \downarrow \text{CHCI/KOH}$$

$$[C] \text{ foul smell}$$



56. How is acetone converted to mesityl oxide



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57. What is Sandmeyer's reaction?



58. Elucidate the differences between soaps and detergents.



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59. Why aniline is less basic than methyl amine?



60. What are the different types of carbohydrates? Give one example of each.



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61. What is coupling reaction ? Give an example.



62. Write the structure formulae of all the isomeric amines with molecular formula C_3H_9N and classify them. Why dimethyl amine is more basic than methyl amine?



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63. Explain Friedel - Craft raction with two examples.



64. Why aniline is less basic than methyl amine?



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65. Explain why phenol is acidic while C_2H_5 OH is neutral?



66. Identify A, B, C and D.

$$CH_3OH \xrightarrow{PG_5} A \xrightarrow{KCN} B \xrightarrow{LiA/H_4} C \xrightarrow{CHCI_3} D$$



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67. Identify A, B, C and D.

$$\cdot C_2H_2COOH \xrightarrow{NH} \stackrel{heat}{\longrightarrow} B \xrightarrow{Br_2/KOH} \stackrel{HNO_2}{\longrightarrow} D$$

