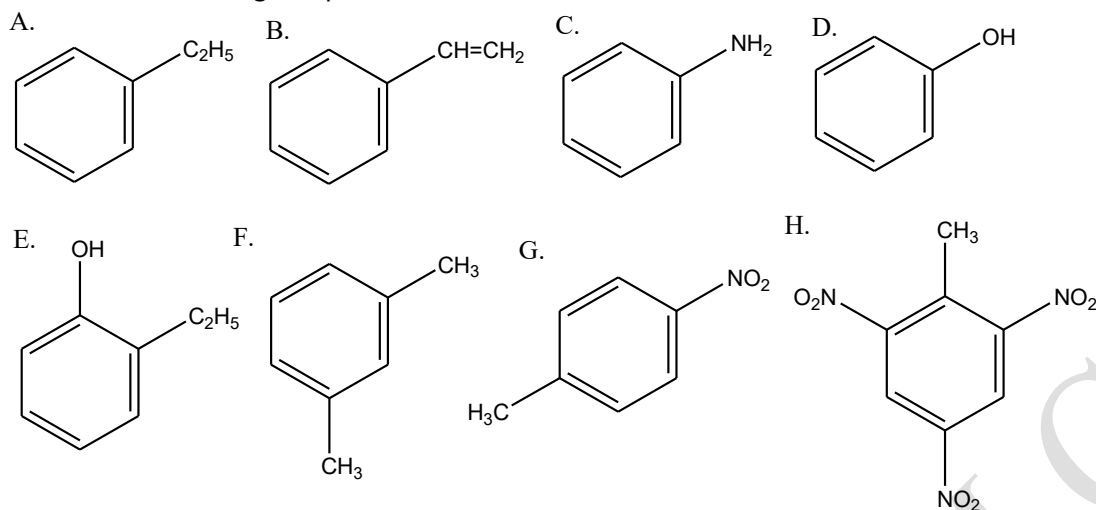


AROMATIC HYDROCARBONS

1. Name the following compounds.



2. Draw the structural formula of the following compounds.

- 1,3-dichloro-5-nitrobenzene
- phenylcyclopentane
- p-chlorophenylcyclopropane
- triphenylmethane
- m-nitrotoluene
- m-dinitrobenzene
- o-bromophenol
- 2,6-dibromo, 4-chloroaniline
- styrene
- isopropylbenzene

3. Write all aromatic isomers of C_8H_{10} and name them.

4. Starting with an inorganic substance, obtain

- A. toluene B. phenol C. aniline

5. How many grams of benzene can be prepared from acetylene which is obtained from 600 g of 80 % calcium carbide?

6. How many grams of aniline are produced from 30.75 g of 80 % nitrobenzene, by 90 % production?

7. How many mL of 0.2 M hydrochloric acid solution are required to neutralize 7.44 g of aniline?

8. A 60 g mixture of phenol and toluene reacts with sodium metal and 4.48 liters of hydrogen are liberated at STP. What is the mass percentage of phenol in the mixture?

9. How many grams of benzene can be produced by the reaction of 7.2 g of sodium benzoate with 0.5 M of 600 mL sodium hydroxide solution?

10. How many grams of methyl chloride, when reacted with excess benzene, are required to obtain 18.4 g of toluene?

MULTIPLE CHOICES

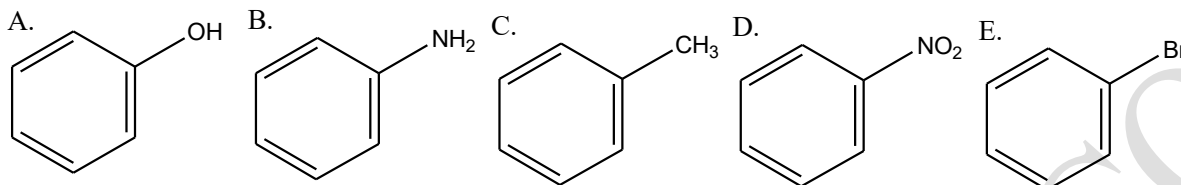
1. How many isomers does the compound $C_6H_4Br_2$ have?

- A. 1 B. 2 C. 3 D. 4 E. 5

2. How many liters of air are needed at STP to burn acetylene produced from 6.4 g of CaC_2 ?

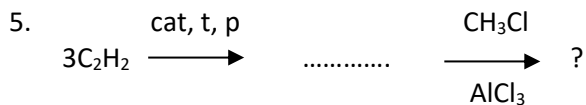
- A. 5.6 B. 11.2 C. 22.4 D. 28.0 E. 56.0

3. Which one of the following compounds is basic?



4. Which one of the following compounds is obtained when toluene is oxidized?

- A. C_6H_6 B. $C_6H_5NO_2$ C. C_6H_5COOH D. C_6H_5Br E. C_6H_{12}



What is the name of the end product of the reactions?

- A. benzene B. toluene C. chloro benzene D. phenol E. methyl aluminate

6. Which one of the following compounds can give a neutralization reaction with sodium hydroxide?

- A. 1-propanol B. 2-propanol C. 1-butanol D. phenol E. benzyl alcohol

7. Aniline is obtained by the reduction of

- A. nitro benzene B. toluene C. phenol D. chloro benzene E. benzyl alcohol

8. Which one(s) is/are soluble in water?

- I. Benzene II. Aniline III. Phenol

- A. I B. II C. III D. I and III E. II and III