

AMINES

1. Which of the following is a primary amine?

- A) CH_3NH_2
 - B) $(\text{CH}_3)_2\text{NH}$
 - C) $(\text{CH}_3)_3\text{N}$
 - D) Aniline
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2. Which test is used to distinguish primary, secondary, and tertiary amines?

- A) Tollen's test
 - B) Carbylamine test
 - C) Hinsberg test
 - D) Benedict's test
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3. Carbylamine reaction is given by:

- A) 1° amines
 - B) 2° amines
 - C) 3° amines
 - D) All of these
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4. Aniline reacts with bromine water to form:

- A) Monobromoaniline
 - B) 2,4,6-Tribromoaniline
 - C) 3-Bromoaniline
 - D) No reaction
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5. The basicity order in aqueous medium is:

- A) $\text{NH}_3 > \text{CH}_3\text{NH}_2 > (\text{CH}_3)_2\text{NH}$
 - B) $(\text{CH}_3)_2\text{NH} > \text{CH}_3\text{NH}_2 > \text{NH}_3$
 - C) $\text{NH}_3 > (\text{CH}_3)_2\text{NH} > \text{CH}_3\text{NH}_2$
 - D) $\text{CH}_3\text{NH}_2 > \text{NH}_3 > (\text{CH}_3)_2\text{NH}$
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6. The hybridization of nitrogen in amines is:

- A) sp
 - B) sp^2
 - C) sp^3
 - D) dsp^2
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7. Which of the following is least basic?

- A) Aniline
- B) Ethylamine

- C) Methylamine
 - D) Ammonia
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8. Aniline does not undergo Friedel–Crafts reaction because:

- A) It is very reactive
 - B) It is basic
 - C) It forms a complex with AlCl_3
 - D) It undergoes side reactions
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9. Which compound is formed when acetamide is reduced with LiAlH_4 ?

- A) Ethylamine
 - B) Methylamine
 - C) Aniline
 - D) Propylamine
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10. Diazotization of aniline gives:

- A) Nitrobenzene
 - B) Benzene
 - C) Diazonium salt
 - D) Benzenediazide
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11. The IUPAC name of $\text{CH}_3\text{CH}_2\text{NH}_2$ is:

- A) Ethylamine
 - B) Ethanamine
 - C) Methylamine
 - D) Aminoethane
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12. Aromatic amines are less basic than aliphatic amines due to:

- A) Resonance
 - B) Hyperconjugation
 - C) Steric hindrance
 - D) Inductive effect
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13. Which of the following will not give carbylamine test?

- A) CH_3NH_2
 - B) $\text{C}_6\text{H}_5\text{NH}_2$
 - C) $(\text{CH}_3)_2\text{NH}$
 - D) $\text{NH}_2\text{CH}_2\text{CH}_3$
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14. The reaction of diazonium salt with phenol gives:

- A) Aniline
 - B) Benzene
 - C) Azo dye
 - D) Phenoxide
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15. The reagent used in the Hofmann bromamide reaction is:

- A) $\text{Br}_2 + \text{KOH}$
 - B) HNO_3
 - C) LiAlH_4
 - D) $\text{HCl} + \text{Zn}$
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16. The end product of Gabriel phthalimide synthesis is:

- A) 1° amine
 - B) 2° amine
 - C) 3° amine
 - D) Nitro compound
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17. Which of the following is not a method of preparation of amines?

- A) Hofmann bromamide
 - B) Gabriel synthesis
 - C) Kolbe's reaction
 - D) Ammonolysis of alkyl halide
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18. Aniline is less basic than methylamine because:

- A) It has a bulky group
 - B) It forms intramolecular H-bonds
 - C) Lone pair on N is delocalized in ring
 - D) It is more electronegative
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19. Which of the following will not undergo diazotization?

- A) CH_3NH_2
 - B) $\text{C}_6\text{H}_5\text{NH}_2$
 - C) $\text{C}_6\text{H}_5\text{CH}_2\text{NH}_2$
 - D) None of these
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20. Which of the following is an aromatic amine?

- A) Methylamine
- B) Ethylamine
- C) Aniline
- D) Diethylamine

 **Answer Key – Amines**

1. A

2. C

3. A

4. B

5. B

6. C

7. A

8. C

9. B

10. C

11. B

12. A

13. C

14. C

15. A

16. A

17. C

18. C

19. A

20. C