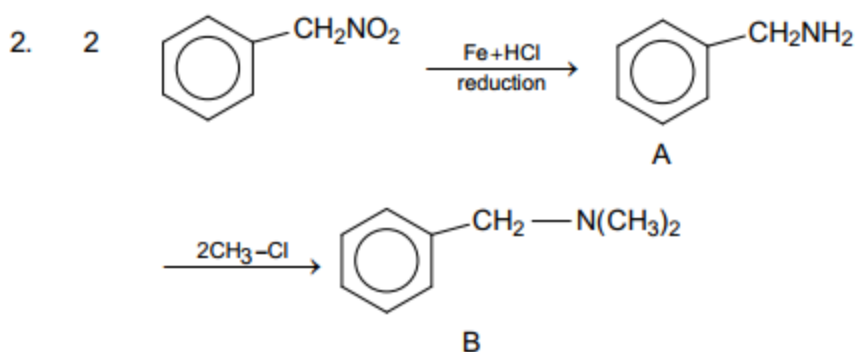
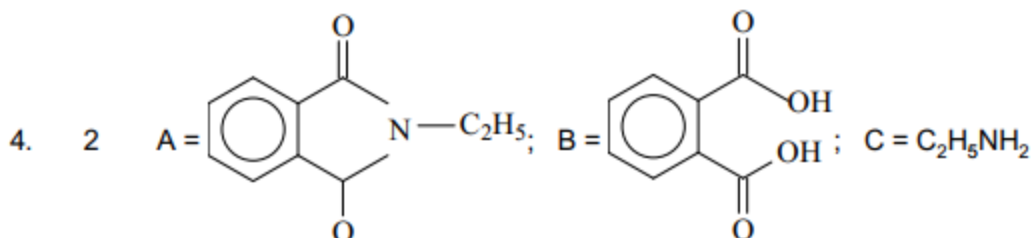


CHAPTER - 22 AMINES

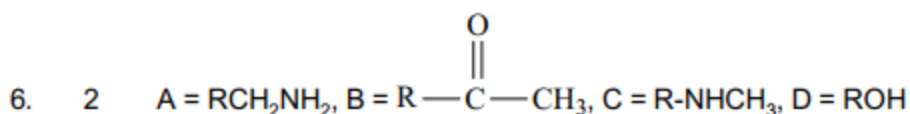
1. 3 Among isomeric amines the order of B.P is $1^\circ > 2^\circ > 3^\circ$



3. 3 Gabriel synthesis is used to prepare 1° aliphatic amines only



5. 2 A = Ethanol, B = Ethyl chloride, C = Ethanamine



7. 2 Gabriel synthesis cannot be used to prepare aryl amines

8. 1 1° amines give isocyanide test

9. 1 It is a 2° amine containing ethyl group

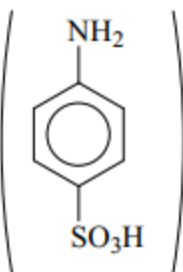
10. 3 'A' is a 1° aliphatic amine

'C' is isopropylisocyanide

\therefore A is isopropylamine

11. 3 Acetylation reduces electron density in the ring

12. 3 A = aniline, B = Sulphanilic acid



13. 3 X = Benzenediazonium chloride; A = H₂O, warm

14. 3 Coupling occurs at the ortho position of hydroxyl group in p-cresol

15. 3 'b', 'c' and 'g' can be prepared by Gabriel synthesis

16. 4 4 moles of NaOH and 1 mole of Br₂ will be consumed per mole of amide in Hoffmann bromamide reaction

17. 3 1° amides (1, 4 and 7) undergo Hoffmann bromamide reaction

18. 15 X =

19. 4 E.W.G increases and E.D.G decreases the reactivity of benzene diazonium cation in coupling reaction.

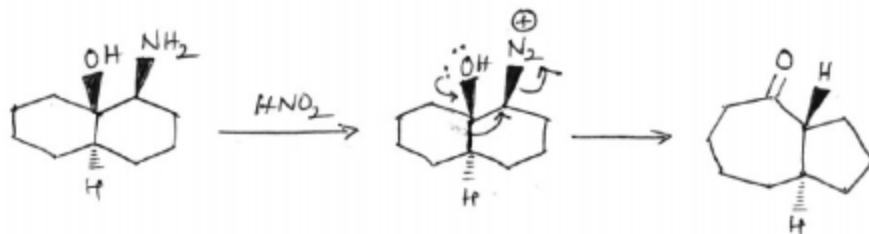
20. C 2° amines react with nitrous acid to form yellow -oily N - nitrosoamine product

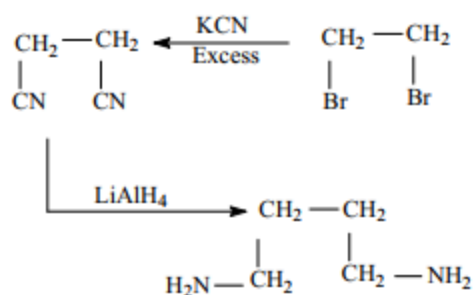
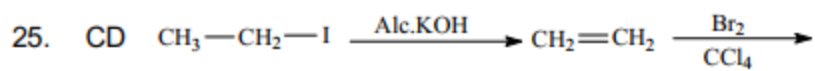
21. B Aryl halides are less reactive than alkyl halides towards nucleophilic substitution reactions

22. D $C_2H_5 - NC \xrightarrow{H_3O^+} C_2H_5 - \overset{\oplus}{N}H_3 + HCOOH$

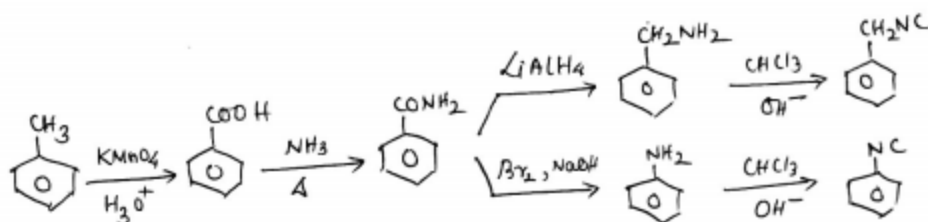
23. D Carbylamine reaction. Products are isocyanide, potassium chloride and water.

24. D

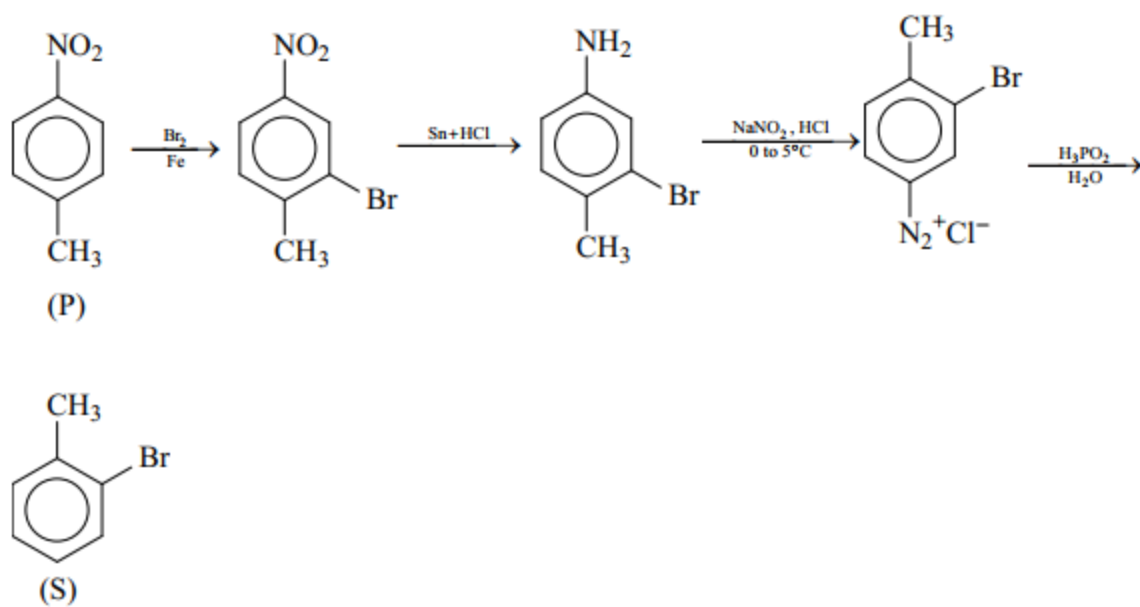




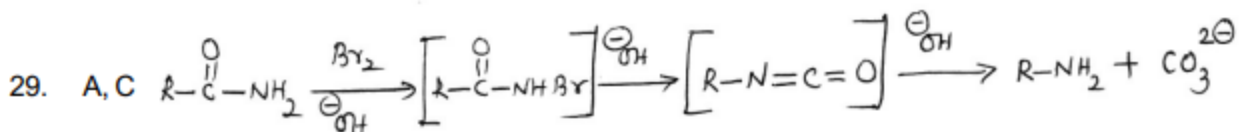
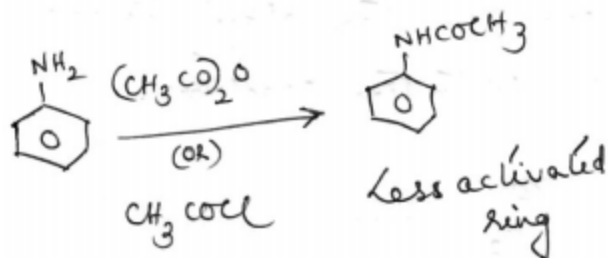
26. BC



27. B



28. C, D



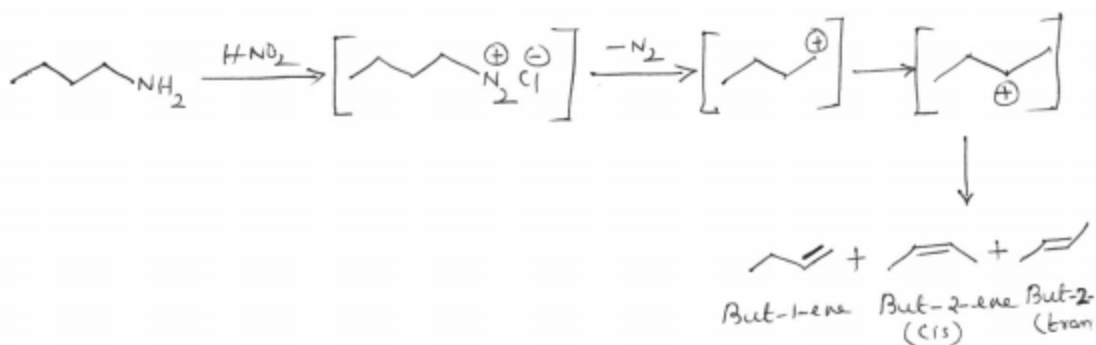
30. BCD

LiAlH_4 ; $\text{Na}(\text{Hg})/\text{C}_2\text{H}_5\text{OH}$ and H_2/Pd can reduce nitriles to corresponding 1° amine.

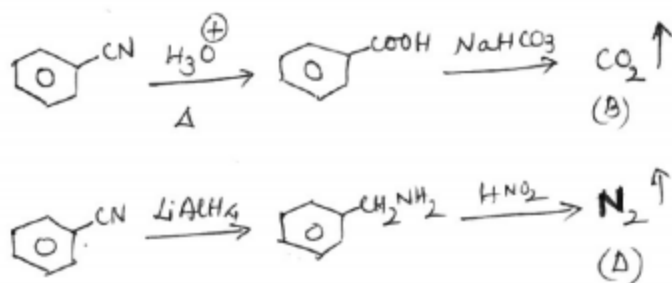
31. ABCD

All the given reactions can produce benzylamine.

32. 3



33. 5



34. 3

Presence of electron donating groups enhance the reactivity of aniline.
Here, compounds 1, 2 and 5 are more reactive than aniline.

35. A

