

CLASS XII GUESS PAPER CHEMISTRY

Alcohols, phenols and amines-Organic Chemistry Class XII

- 1) Synthesise cyclohexylmethanol using an suitable alkyl halide by an SN_2 mechanism.
- 2) O-nitrophenol can be separated from p-nitrophenol from steam distillation, which is steam volatile and why?
- 3) Prepare phenol from cumene.
- 4) Explain how does the $-OH$ group attached to a carbon of benzene ring activate it towards electrophilic substitution?
- 5) What happens when phenol is oxidised in presence of $Na_2Cr_2O_7$?
- 6) Synthesize aspirin from benzene.
- 7) Write following reactions:-
 - a) Kolbe's reaction.
 - b) William Souns Synthesis
 - c) Riemer Tiemann reaction
 - d) Formation of symmetrical and unsymmetrical ether.
- 8) What happens when ethanal is oxidised in presence of $NaBH_4$ and acetone in presence of $NaBH_4$? How will you separate the both resultants?
- 9) Write structure of Anisole. Also describes its reaction with:-
 - a) Friedel Craft alkylation
 - b) Nitration
 - c) Bromination
 - d) Friedel Craft acetylation.
- 10) Describe mechanism of :-
 - a) Hydration of alkene
 - b) Dehydration of alkene
 - c) Formation of ether through alcohol.
- 11) Give suitable explanation for the difference between bond angle in methanol, phenol and methoxymethane.
- 12) Ammonolysis is not the best method to obtain 1° amine. Comment. Describe any other better method to obtain 1° amine.

- 13) Why pyridine is used in alkylation of aniline?
- 14) Can we obtain aryl amine through ammonolysis? Give reason.
- 15) Aniline cannot be prepared through Gabriel phthalamide reaction? Why?
- 16) Give reason:
- Aliphatic amine of higher molecular mass are immiscible in water.
 - Aniline do not undergo Friedel Craft reaction.
 - In comparison with alcohol and carboxylic acid, amine have lower boiling point.
 - RCH_2NH_2 gives carbylamines test but R_2CHNH_2 do not.
- 17) Why nitration of aniline is first prefer to protection of aniline and then nitration?
- 18) What is Hinsberg test? Give reaction for all three amine.
- 19) How will you separate following mixtures:-
- 2-methyl butanamine and benzenamine
 - $1^\circ, 2^\circ$ & 3° amines
 - Aliphatic and aromatic amines
 - $1^\circ, 2^\circ$ & 3° alcohols
- 20) Convert :-
- Aniline to 1,3,5- tri bromobenzene
 - 3-methylaniline into 3-nitrotoulene
 - Benzene to 1,2,3- trinitrobenzene
 - 3-nitroaniline to 1-chloro 3- iodobenzene
 - Nitrobenzene to benzoic acid
 - Benzoic acid to aniline
 - Benzyl chloride to 2- phenylethanamine
 - Aniline to p-bromoaniline
 - Benzene to m-bromophenol
 - Aniline to 2,4,6-tribromofluorobenzene
 - Benzamide to toluene
 - Aniline to benzyl alcohol
- 21) Write following reactions:-
- Diazotisation
 - Azo dye
 - Sand Meyer's
 - Coupling
 - Carbylamine
 - Orange dye formation
 - Swart's

h) Benzoylation of aniline

i) Nitrous acid reaction with aliphatic and aromatic amines.