

TEST PAPER NO. 13

TOPIC : ORGANIC FUNCTION GROUP IV NITROGEN CONTAINING COMPOUND

M.M. 50

TIME: 3 HRS.

Name of Student _____ Roll No. _____

Q.NO. 1-10 carries 1 mark, 11-20 2 marks, 21-25 carries 3 marks, 26 carries 5 marks.

1. Arrange the following in decreasing order of their basic strength:
 $C_6H_5NH_2$, $C_2H_5NH_2$, $(C_2H_5)_2NH$, NH_3
2. Write reactions of the final alkylation product of aniline with excess of methyl iodide in presence of sodium carbonate solution.
3. Describe a method for the identification of primary, secondary and tertiary amines. Also write chemical equations of the reaction involved?
4. Why pK_b of aniline is more than that of methylamine.
5. Ethylamine is soluble in water but aniline is not why?
6. Aniline does not undergo Friedel Crafts reaction. Why?
7. Gabriel phthalimide synthesis is preferred for synthesising primary amines why?
8. What is Diazotization reaction. Explain with example?
9. Write the IUPAC name for following compound:
 - a. $(CH_3)_2CHNH_2$
 - b. $C_6H_5NHCH_3$
10. Write the structures of different isomeric amines corresponding to the molecular formulae $C_4H_{11}N$
11. Write the chemical equations for the following reactions:
 - a. Reaction of ethanolic NH_3 with C_2H_5Cl
 - b. Ammonolysis of benzyl chloride and reaction of amine so formed.
12. Write down the chemical equations for the following conversions:
 - a. CH_3CH_2Cl to $CH_3CH_2CH_2NH_2$
 - b. $C_6H_5CH_2Cl$ to $C_6H_5CH_2CH_2NH_2$
13. Write the structures and IUPAC names of
 - a. The amide which gives propanamine by hoffmann bromamide reaction
 - b. The amine produced by the Hoffmann degradation of benzamide
14. How will you distinguish b/w
 - a. Methyl amine and dimethylamine
 - b. Aniline and benzylamine
15. Write short note on:
 - a. Carbylamine Reaction
 - b. Hoffmann Bromamide
16. Explain the basic nature of primary, secondary and tertiary amine in
 - a. Vapour Phase
 - b. Aqueous solution
17. Convert :
 - i. 3-Methylaniline into 3-nitrotoluene
 - ii. Aniline into 1,3,5 - tribromobenzene
18. How will you convert 4-nitrotoluene to 2-bromobenzoic acid (5 steps) and write the IUPAC name of each intermediate product.

