

Model Question Paper
Organic Nitrogen Compounds - Part III

12th Standard

Chemistry

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

III. Question number 16 is compulsory.

Time : 01:30:00 Hrs

Total Marks : 60

5 x 1 = 5

Part-A

- 1) Which one of the following is a secondary amine ?
(a) aniline (b) diphenyl amine (c) sec. butylamine (d) tert. butylamine
- 2) $C_6H_5NH_2 \xrightarrow[273K-278K]{NaNO_2/HCl} X$. Identify X.
(a) C_6H_5Cl (b) C_6H_5NHOH (c) $C_6H_5N_2Cl$ (d) C_6H_5OH
- 3) Which of the following will not undergo diazotisation ?
(a) m-toluidine (b) aniline (c) p-amino phenol (d) benzyl amine
- 4) Aniline differs from ethylamine by the reaction with
(a) metallic sodium (b) an alkyl halide (c) chloroform and caustic potash (d) nitrous acid
- 5) When aqueous solution of benzene diazonium chloride is boiled the product formed is
(a) benzyl alcohol (b) benzene + N_2 (c) phenol (d) phenyl hydroxylamine

Part-B

- 6) How will you distinguish between ethylamine and diethylamine?
- 7) Write a note on the basicity of amines.
- 8) Explain why ethylamine is stronger than ammonia?
- 9) What is Gabriel phthalimide synthesis?
- 10) How is nitro benzene converted to aniline ?

5 x 3 = 15

Part-C

- 11) Explain the following reactions i) Sandmeyer reaction, ii) Gattermann reaction, iii) Gomberg reaction
- 12) Explain the diazonium Coupling reaction of benzene diazonium chloride with i) phenol, ii) N, N-dimethyl aniline, iii) aniline
- 13) How are the following compounds obtained from aniline? i) acetanilide ii) p-benzo quinone iii) S-diphenyl urea
- 14) Explain the following reaction (i) Aniline to benzalaniline, (ii) Oxidation of benzyl amine, (iii) Bromination of aniline.

4 x 5 = 20

Part-D

- 15) a) Explain the following conversions. (i) benzylamine to benzyl alcohol, (ii) aniline to S-diphenyl urea, (iii) benzamide to aniline
b) Explain the nitration reaction of aniline.
 - 16) a) a) What is the action of nitromethane on i) chlorine and alkali ii) acetaldehyde iii) nitrous acid
b) What is the action of nitromethane of the following compounds? i) NaOH ii) acetone iii) HCL
- (OR)**
- b) a) Explain the mechanism nitration of benzene.
b) Explain the mechanism Hoffmann bromamide reaction.

2X10=20
