

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

FIRST YEAR

B.A./B.SC. FIRST SEMESTER (July – December), 2011

Mid-Semester Examination, September, 2011

Date : 13/09/2011

CHEMISTRY (General)

Time : 11 am – 12 noon

Paper : I

Full Marks : 25

1. Answer all the questions :

- a) State the postulates of Werner's co-ordination theory. [4]
b) $K_2[Cd(CN)_4]$ and $K_4[Fe(CN)_6]$ belongs to different class of complex compounds. Explain. [3]

Or,

Write briefly the characteristic features of complex compound and double salt with examples. [3]

- c) Write down the reactions for the test of sulphur as a special element in an organic compound. [2]
d) How will you identify the nitro group both in m-dinitrobenzene and in p-nitro aniline? [4]
e) What happens when freshly prepared aqueous ferric chloride solution is added to an alcoholic solution of phenol? [2]
f) What do you mean by +I effect and –I effect? Explain with example. [3]

Or,

Why alkyl group has +I effect whereas benzene ring shows –I effect? [3]

- g) Between CH_3COOH and C_6H_5COOH which one is stronger acid? Explain. [2]
h) Why $C_6H_5NH_2$ is ortho and para orienting group? Explain. [2·5]
i) $C_6H_5NH_2$ forms diazonium salts but why not $C_2H_5NH_2$ forms any diazonium like salts? [2·5]