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TOPICS FOR INTERNAL ASSESSMENT ASSIGNMENTS (2010-11)
Course: M.Sc. APPLIED CHEMISTRY (Previous)

Note: Students are advised to read the separate enclosed instructions before beginning the writing of assignments.

Out of 15 Internal Assignment marks per paper, 5 marks will be awarded for regularity (attendance) to Counseling/ Contact Programme/ Practical classes pertaining to the paper. Therefore, the topics given below are only for 10 marks each paper.

Answer ANY TWO Questions from Each Paper. Each question carries FIVE marks.

Paper I: Analytical and Spectroscopic Techniques.

1. Explain the principle, theory and instrumentation of mass spectrometry.
2. What are chromophores and auxochromes? Write a note on anisotropic effect.
3. Describe the principle and applications of HPLC.

Paper II: Inorganic Chemistry

1. What are interhalogens? Discuss the preparation properties and structure of cyanogen and thiocyanogen.
2. Briefly discuss the various defects in crystal structure.
3. Describe the preparation and structure of tetrasulphur tetranitride.

Paper III: Organic Chemistry

1. Discuss the mechanism of aromatic halogenation and sulphonation.
2. Discuss the general reactions of monosaccharides.
3. Discuss the aromaticity of annulenes and heteroannulenes.

Paper IV: Physical Chemistry

1. Describe construction, working and application of dry cell.
2. Explain nuclear fission and fusion reactions with examples.
3. Discuss the factors affecting the CMC of surfactants.