

**Nephelometry and Turbidimetry** - General discussion, instrumentation and applications

**Books Recommended :**

1. Analytical Chemistry, G.D Christian, J. Wiley.
2. Principles of Instrumental Analysis, D.A. Skoog and J.L. Loary, W.B.Saunders.
3. Instrumental Methods of Analysis, B.K. Sharma
4. Instrumental Methods of Analysis, Chatwal and Anand.
5. Vogel's Textbook of Quantitative inorganic Analysis L. Barret et.al. ELBS (Longmann's Ed.)

**M.Sc. (FINAL) CHEMISTRY, 2008-2009**

**PRACTICALS, GROUP-D**

**Duration: 18 Hrs** (spread over three days) **M.M. 200**

**Distribution of Marks -**

1. Exercise-I	50 Marks
2. Exercise -II	50 Marks
3. Exercise -III	25 Marks
4. Seminar	20 Marks
5. Report on Industrial Tour	15 Marks
6. Viva-Voce	20 Marks
7. Record/Sessional	20 Marks
<b>Total</b>	<b>200 Marks</b>

**Exercises -**

1. Estimation of Ca, Na, K, by flame photometry.
2. Determination of Ca, Mo, Zn, Cu, phosphate and silica contents of soil samples
3. Analysis of sludge obtained from Zinc Smelter
4. Analysis of cement
5. Determination of water in mixture by Karl-Fisher method

6. Separation of amino acids by ion exchange and chromatographic method
7. Analysis of oils and fats-saponification and iodine value
8. Colorimetric estimation of fluoride, Fe in drinking waters
9. Determination of fats, protein and solid in milk
10. Polarimetric estimation of sugar
11. Analysis of aspirin, sulpha drugs and vitamin C.
12. Potentiometric estimation of Ni, Zn, etc.
13. Analysis of lime, brass and gun-metal.
14. Analysis of HCl extract or fusion with  $\text{Na}_2\text{CO}_3$  for Al, Fe, Ca, Mg, P and K
15. Estimation of soluble salts in soils by conductometric method
16. Separation and identification of most common acidic and basic drugs by TLC
17. Analysis of fertilizers
18. Estimation of lead and tin in solder or bismuth, cadmium and lead in low melting alloys such as Woods metal using EDTA (volumetrically)
19. Analysis of German silver (copper, zinc and nickel)