

M.Phil –Chemistry [Semester – I]
Paper-I Research Methodology[50 Marks]

Hours 45

(a) Literature Search and

(b) Instrumentation method based on

1. Fluorescence and phosphorescence methods, Raman Spectra, NMR Spectra, 10 articles on recent advances [25Marks]
– Talanta, Analytical Chemistry , Chemical Education etc.
2. X-Ray Spectroscopy, Radio Chemical Methods, ORD,CD, Thermal analysis, 10 articles on recent advances- Talanta, Analytical Chemistry Chemical education etc. [20Marks]

References:-

Research Papers

1. The acronyms used in the world of spectroscopy, microscopy and diffractometry- Compilation and classification –Spectro Chemicals Acta- vol.:36,PP 5- 1989
2. Atomic absorption in clinical analysis.
Bio Chemical –vol. :13- PP -1989
3. Raman spectroscopy 20 years later – Chemical Tech. – 1990
4. Solving mysteries – using Infrared Spectrometry and chromatography – Analytical Chemistry – Vol. : 60- PP – 1988
5. Time Resolved Spectroscopy using FTIR
International Laboratory, vol. :62
6. Solid Sampling techniques in the far infrared regions
International Laboratory – 1987 June.
7. Analysis of Palladium (II) by a kinetic method and mercury (I) by volumetry Indian Journal of chemistry – vol :29,1990.
8. A new Catalytic kinetic spectrophotometry of the determination of iron

- Talanta, vol. -36- PP 1107-1110
9. Polarographic adsorption analysis and tensametry, Analyst – Vol. 113 Jan. 1986.
 10. Reciprocal derivative constant current stripping analysis, – Talanta – vol. 35-pp -862-867.
 11. Derivative UV – Visible region absorption spectrophotometry and its analytical applications, – Talanta – Vol. :35 PP-753-761.
 12. Separation of Ga, In & Tl by extraction with n-octyl aniline in CHCl_3 Talanta – Vol. :35- pp-357-360.
 13. Corrosion measurements by potential step chrono amperometry -Talanta –Vol :32-pp – 307-311.
 14. Analytical Chemistry of Synthetic food antioxidants A review – Analyst vol:112 – (July)1987.

Reference Books:

1. Spectroscopy in Inorganic Chemistry Vol :I & II --C.N.R .Rao and J.R.Ferraro.
2. Organic spectroscopy- William Kemp (ELBS)
3. Techniques of chemistry – A. Weisberger and B.W. Rossiter.