

ST.JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM

V SEMESTER

CHEMISTRY

Time: 3Hrs/Week

CH-E3-5253(2)

INDUSTRIAL CHEMISTRY – I

Max.Marks:50

W.e.f.20AH Batch

CHEMISTRY PRACTICAL – III A

SYLLABUS

Course Objectives:

To provide the skills of quantitative estimations by deploying instrumental and manual techniques

Course Outcomes:

On successful completion of this practical course, student shall be able to:

- Determine free acidity in ammonium sulphate fertilizer.
- Learn the procedure for the Estimation of Calcium in Calcium ammonium nitrate fertilizer.
- Demonstrate skills on Estimation of phosphoric acid in superphosphate fertilizer.
- Acquire skills in using colorimetry for the estimation of sucrose.

Practical (Laboratory) Syllabus:

Determination of free acidity in ammonium sulphate fertilizer.

1. Estimation of Calcium in Calcium ammonium nitrate fertilizer.
2. Estimation of phosphoric acid in superphosphate fertilizer.
3. Estimation of sucrose by colorimetry.

Lab References:

1. Text book of Vogel's Quantitative Chemical Analysis, Sixth edition, Pearson.
2. Text book on Experiments and Calculations in Engineering Chemistry, S.S.Dara, S.Chand.
3. R.Gopalan, D.Venkappayya, S.Nagarajan: Engineering Chemistry, Vikas Publications.
4. B.K.Sharma: Engineering Chemistry, Goel Publishing House, Meerut

Co-Curricular Activities:

a) Mandatory:(Lab/field training of students by teacher:(lab:10+field:05):

1. **For Teacher:** Training of students by the teacher in laboratory and field for not less than 15 hours on field related skills in determination of free acidity, estimation of calcium and phosphoric acid in a fertilizer, use of colorimeter to estimate sucrose.
2. **For Student:** Student shall visit a related industry/chemistry laboratory in universities/research organizations/private sector facility and observe the surface coatings of surfaces used to prevent the corrosion. Write their observations and submit a hand written fieldwork/project work report not exceeding 10 pages in the given format to the teacher.
3. Max marks for Fieldwork/project work Report: 05.
4. Suggested Format for Fieldwork/project work: *Title page, student details, index*

page, details of place visited, observations, findings, and acknowledgements.

5. Unit tests (IE).

b) Suggested Co - Curricular Activities:

1. Training of students by related industrial experts.
2. Assignments, Seminars and Quiz (on related topics).
3. Visits to facilities, firms, research organizations etc.
4. Invited lectures and presentations on related topics by field/industrial experts.

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