## CHEMISTRY LAB

**(Common to ,IT,CSE-AIML,CSE-DS)**

| **Course Code** | 23BS1251 | **Year** | I | **Semester** | II |
|---|---|---|---|---|---|
| **Course Category** | Basic Sciences | **Branch** | **CSE (AI ML)** | **Course Type** | Lab |
| **Credits** | 1 | **L-T-P** | 0-0-2 | **Prerequisites** | Nil |
| **Continuous Internal Evaluation:** | **30** | **Semester End Evaluation:** | **70** | **Total Marks:** | **100** |

| **Course Outcomes** | |
|---|---|
| **Upon successful completion of the course, the student will be able to** | |
| CO1 | **Demonstrate** the working of potentiometer and conductometer instruments. (L3) |
| CO2 | **Prepare** advanced materials like polymers and Nano materials (L3) |
| CO3 | **Calculate** the strength of Pb-Acid battery(L4) |
| CO4 | **Examine** the ferrous iron content in a sample using dichrometry (L4) |
| CO5 | **Calculate** the wave length of a sample by using UV-Visible Spectroscopy and colorimetry (L4) |

| **Contribution of Course Outcomes towards achievement of Program Outcomes &Strength of correlations(3:High,2: Medium, 1:Low)** | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **PO 1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PSO1** | **PSO2** |
| CO1 | 3 | | | | | | | | | | | | |
| CO2 | 3 | | | | | | | | | | | | |
| CO3 | | 3 | | | | | | | | | | | |
| CO4 | | 3 | | | | | | | | | | | |
| CO5 | | 3 | | | | | | | | | | | |

| Syllabus | | |
|---|---|---|
| Exp. No. | Contents | Mapped CO |
| Experiments | | |
| 1 | Conductometric titration of strong acid vs strong base | CO1 |
| 2 | Conductometric titration of weak acid vs. strong base | CO1 |
| 3 | Determination of cell constant and conductance of solutions | CO1 |
| 4 | Potentiometry - determination of redox potentials and emfs | CO1 |
| 5 | Determination of Strength of an acid in Pb-Acid battery | CO3 |
| 6 | Preparation of a Bakelite | CO2 |
| 7 | Verify Lambert-Beer's law | CO5 |
| 8 | Wavelength measurement of sample through UV-Visible Spectroscopy | CO5 |
| 9 | Preparation of nanomaterials by precipitation method | CO2 |
| 10 | Estimation of Ferrous Iron by Dichrometry | CO4 |

| **Learning Resources** |
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| Reference:<br>• "Vogel's Quantitative Chemical Analysis 6th Edition " Pearson Publications by J. Mendham, R.C.Denney, J.D.Barnes and B. Sivasankar |