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| **University of Management & Technology**  School of Science  Department of Chemistry  logo | | | |
| CH-421 Practical-II | | | |
| **Lecture Schedule** |  | **Semester** |  |
| **Pre-requisite** | Practical-I | **Credit Hours** | 1 |
| **Instructor(s)** |  | **Contact** |  |
| **Moodle** |  |
| **Office** |  | **Office Hours** |  |
| **Lab Policy** | Students are expected to perform experiments (as per attached list)related to the course work, analyze the data, draw conclusions, and write a report. Grades will be awarded based on student’s lab reports and a final exam in the lab. | | |
| **Grading**  **Policy for Lab work** | Laboratory Reports 40 Marks  Final Examination 60 Marks | | |
| **Make-up Labs** | If due to an unavoidable circumstance a student has to miss a Lab, then he/she should obtain an excuse for this from the instructor. The instructor will accept an excuse only if he feels that the student had a genuine reason. In an accepted case the instructor may allow the student to take a make-up session. | | |
| **Attendance**  **Policyfor Lab** | Students missing more than 20% of the labs will receive an “F” grade in the Lab work. | | |



List of Experiments

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| **Week** | **Exp #** | **Title of Experiment** |
| 1st | Introduction to general experimental and lab safety guidelines. | |
| **Determination of Carbondioxide** | | |
| 2nd | 1 | Determine the amount of free Carbon dioxide in a given sample of cold drink |
| **Refractometry** | | |
| 3rd | 2 | Determination of concentration of sugar in given juice sample by refractometeric method. |
| **Refractometry** | | |
| 4th | 3 | Determination of concentration of sugar in given jam sample by refractometeric method. |
| **Dyes** | | |
| 5th | 4 | To Dye fabric with different shades |
| **Determination Concentration of KMnO4** | | |
| 6th | 5 | Determine the concentration KMnO4 solutions using spectroscopy |
| **Determination of Concentration of K2Cr2O7** | | |
| 7th | 6 | Determine concentration of K2Cr2O7 solutions using spectroscopy. |
| **Investigate The Composition of Complex Ion** | | |
| 8th | 7 | Investigate the composition of complex ion formation between Fe(III) ion and thiocyanate ion by Job’s method.. |
| **Study of Complex Ion formation and Amphoterism** | | |
| 9th | 8 | Study the formation of complex ions and the amphoteric behavior of some metal hydroxides. |
| **Determination of Concentration of Copper by Spectrophotometer** | | |
| 10th | 9 | Determine the unknown concentration of copper in a sample solution spectrophotometrically |
| **Preparation of Crystals of K3[Cr(C2O4)].3H2O** | | |
| 11th | 10 | Preparation of Crystals of potassium tris oxalato chromate(III) i.e. K3[Cr(C2O4)].3H2O and also calculate the percentage yield |
| **Adsorption of Oxalic Acid on Activated Charcoal** | | |
| 12th | 11 | Study the process of adsorption on activated charcoal. |
| 13th | **Makeup Classes Week/Revision** | |
| 14th | **Preparation for Final** | |
| 15th | **Lab. Final Examination** | |