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| **University of Management & Technology**School of ScienceDepartment of Chemistrylogo |
| 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** |