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| **University of Management & Technology**  School of Science  Department of Chemistry  logo | | | |
| CH-418 Practical-1 | | | |
| **Lab**  **Schedule** |  | **Semester** |  |
| **Pre-requisite** | F.Sc. /A-level Chemistry | **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. | |
| **Prepration of Sanitizer** | | |
| 2nd | 1 | Synthesize the sample of hand sanitizer at laboratory scale. |
| **Determination of** **max of K2Cr2O7** | | |
| 3rd | 2 | Determine the value of Max. of K2Cr2O7 solutions using spectroscopy. |
| **Sponification value and Ester value** | | |
| 4th | 3 | Determine saponification and ester value of the given fat/oil sample. |
| **%age of Iron in Tablet** | | |
| 5th | 4 | Determine the percentage mass of Iron (II) in the given tablet by redox titration method. |
| **Determination of** **max of KMnO4** | | |
| 6th | 5 | Determine the value of Max. of KMnO4 solution using spectroscopy. |
| **Determination of Al3+ by Complexometric Back Titration** | | |
| 7th | 6 | Determine the amount of Al3+ by back complexometric titration. |
| **Determination of Aspirin** | | |
| 8th | 7 | Determination of aspirin by back titration method |
| **Diesel Index via Aniline Point Test** | | |
| 9th | 8 | Determine the diesel index of given sample of diesel oil via “Aniline Point Test”. Also calculate approximate octane number of the sample from diesel index determination. |
| **Gravimetric Estimation of Nitrate Ion** | | |
| 10th | 9 | Estimation of nitrate ion in the given sample solution using nitron gravimetrically. |
| **Spectrophotometric Determination of Iron-III** | | |
| 11th | 10 | Determine iron (III) in the given sample of tablet spectrophotometrically. |
| 12th | **Makeup Classes Week/Revision** | |
| 13th | **Preparation for Final** | |
| 14th | **Lab. Final Examination** | |
| 15th | Week for Preparation of Theory Final Examination | |