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

|  |  |  |
| --- | --- | --- |
| **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 |