# JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

## DEPARTMENT OF MATHEMATICS & SCIENCE

## LESSON PLAN

## SESSION: 2023-24

**SUBJECT- ENGINEEING CHEMISTRY PRACTICAL** **BRANCH- CIVIL, MECHANICAL**
**NAME OF THE FACULTY- JAGANNATH ORAM, SULAGNA DAS** **1ST YEAR: SEMESTER-2ND Semester**
**SESSION: SUMMER, SECTION: C1,C2,M1,M2,M3,M4**

| Sl.No. | WEEK | TIME (MIN) | LECTURE NO. | Experiments to be performed |
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| 1 | 1ST | 110 | 1 | Introduction to Chemistry lab regarding record maintenance, safety rules and guidelines. |
| | | 110 | 2 | **EXPERIMENT- 1 (Preparation and study of physical and chemical properties $CO_2$ gas)** Introduction of the apparatus & chemical required and demonstration of Experiment |
| 2 | 2ND | 110 | 3 | Experiment performed by students |
| | | 110 | 4 | Record writing by the students, record checking and viva voce. |
| 3 | 3RD | 110 | 5 | **EXPERIMENT- 2 (Preparation and study of physical and chemical properties $NH_3$ gas..)** Introduction of the apparatus & chemical required and demonstration of Experiment |
| | | 110 | 6 | Experiment performed by students |
| 4 | 4TH | 110 | 7 | Record writing by the students, record checking and viva voce. |
| | | 110 | 8 | **EXPERIMENT- 3 (Crystallization of Copper sulphate from copper carbonate)** Introduction apparatus & chemical required and demonstration of Experiment |
| 5 | 5H | 110 | 9 | Experiment performed by students |
| | | 110 | 10 | Record writing by the students, record checking and viva voce. |

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| 6 | 6TH | 110 | 11 | **EXPERIMENT- 4(I) (Acidmetry titration)**<br>Introduction apparatus & chemical required and demonstration of Experiment |
| | | 110 | 12 | Experiment, Observation and calculation by students. |
| 7 | 7TH | 110 | 13 | Record writing by the students, record checking and viva voce. |
| | | 110 | 14 | **EXPERIMENT- 4(ii) (Alkalimetry titration)**<br>Introduction apparatus & chemical required and demonstration of Experiment |
| 8 | 8TH | 110 | 15 | Experiment , Observation and calculation by students |
| | | 110 | 16 | Record writing by the students, record checking and viva voce. |
| 9 | 9TH | 110 | 17 | **EXPERIMENT- 5(Tests for acid radicals (Known):**<br>(i) Carbonate,<br>(ii) Sulphide,<br>(iii) Chloride,)<br>(iv) Nitrate and<br>(v) Sulphate<br>Introduction to acid radical and demonstration of Experiment. |
| | | 110 | 18 | Experiment performed by students |
| 10 | 10TH | 110 | 19 | Record writing by the students, record checking and viva voce. |
| | | 110 | 20 | **EXPERIMENT- 6(Test for unknown Acid radicals)**<br>Preliminary & basic idea to be given to find out unknown acid radical |
| 11 | 11TH | 110 | 21 | Experiment performed by students |
| | | 110 | 22 | Record writing by the students, record checking and viva voce |
| 12 | 12TH | 110 | 23 | **EXPERIMENT- 7 (Test for Basic radicals (Known):**<br>(i) Ammonium<br>(ii) Zinc<br>(iii) Magnesium<br>(iv) Aluminium<br>(v) Calcium<br>(vi) Sodium |

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| | | | | (vii) potassium<br>Introduction to basic radical and demonstration of Experiment |
| | | 110 | 24 | Experiment performed by students |
| 13 | 13TH | 110 | 25 | **EXPERIMENT- 8 (Test for unknown basic radicals)**<br>Preliminary & basic idea to be given to find out unknown basic radical |
| | | 110 | 26 | Experiment performed by students |
| 14 | 14TH | 110 | 27 | Record checking and viva voce. |
| | | 110 | 28 | **EXPERIMENT- 9 Test for unknown salt** (composed of one basic radical and one acid radical)<br>Preliminary & basic idea to be given to find out unknown basic radical and acid radical |
| 15 | 15th | 110 | 29 | Experiment performed by students |
| | | 110 | 30 | Record checking and viva voce. |

18/01/24

18/01/24

**Signature of faculty Member:**

18/01/2024

**Counter signature of H.O.D:**

Sr. Lect. (M/Sc)
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