**LessonPlan**Name of the Faculty: Smt. Naveen Rathi

Discipline: MLT

Semester: 1st

Subject: BasicChemistry

Lesson Plan Duration: Aug-2024 to Dec-2024 WorkLoad(Lecture/Practical)perweek(inhours):Lecture=02,Practical=2

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| WEEKS | DAYS | THEORYTOPICS | PRACTICALS |
| 1 | 1 | 1.1S.I.unitsofpressure,vol,temp,density, specific gravity | General instructionsandcodeofconduct in laboratory. |
|  | 2 | 1.2Matter,element,compoundandmixtures, atom,molecule,ion,symbolsandformulae |  |
| 2 | 3 | 1.3Atomicmass,molarmass,moleanditsappl. | Volumetriccanalysisand apparatusUsedtheirin. |
|  | 4 | 1.4Solution,strengthofsol,molarity,molality, normality,massfraction,molefractionandppm |  |
| 3 | 5 | Revisionandclasstest | 1.Preparationofstandardsolutions. |
|  | 6 | * 1. Sourcesofwater
	2. Hardandsoftwater,typesofhardness, action of soap on hard water2.3Disadvantagesofhardwater

Indomesticandindustrialuses |  |
| 4 | 7 | 2.4Qualitiesofdrinkingwaterandpurificationofavailablewaterfordrinkingpurposes | Vivavoce |
|  | 8 | * 1. Equilibriumstate,equilibriumconstant
	2. Ionizationofelectrolyteinaqueoussolutio n,ionicequilibrium,degreeof

ionization,self-ionizationofwaterandionicproduct |  |
| 5 | 9 | * 1. ConceptofpHandpH scale
	2. Various concept of acids/bases; strongacids/bases,weakacids/bases, Dissociationconstantsofacids/bases.

Neutralization,acidbasetitration,indicatorsforacidbasetitration | 2.ToprepareN/10Sodium carbonate |
|  | 10 | 3.5Hydrolysisofsalts,commonioneffect,buffersolutions,actionofabuffersolution,appof buffers |  |
| 6 | 11 | 4.1Electronicconceptofoxidation,reductionandredoxreactions | Vivavoce |
|  | 12 | * 1. Electrolytesandnonelectrolytes
	2. Conductorsandtheirtypes
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| 7 | 13 | 4.4Electrolysis | 3.ToprepareM/10oxacid |
|  | 14 | 4.5Applicationsofelectrolysis |  |
| 8 | 15 | Revisionandclasstest | Vivavoce |
|  | 16 | 5.1Adsorptionanditstypes |  |

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| 9 | 17 | 5.2.Applicationsofadsorption | 4.Toprepare5NHCl fromgiven12N HCl,N/10HCL |
|  | 18 | 5.3.Colloidalstateandtypesofcolloids |  |
| 10 | 19 | 5.4.Preparationandpurificationofcolloidsinbrief | Vivavoce |
|  | 20 | 5.5.Gelsandsolution,emulsions |  |
| 11 | 21 | 5.6.Cleaningactionofsoaps | 5.lodometrictitrations |
|  | 22 | Revisionandclasstest |  |
| 12 | 23 | 6.1Introductionandimportanceoforganiccomp | Vivavoce |
|  | 24 | 6.2Comparisonoforganicandinorganiccompounds |  |
| 13 | 25 | 6.3PropertiesofcarbonandHydrogen | 6.Oxidation-redtitration |
|  | 26 | Revisionandclasstest |  |
| 14 | 27 | 7.1Preparation,propertiesandusesof saturated hydrocarbons | Vivavoce |
|  | 28 | 7.2Preparation,propertiesandusesofunsaturated hydrocarbons |  |
| 15 | 29 | 7.3Sourcesofhydrocarbons | 7.Acid-basetitrations |
|  | 30 | 7.4Preparation,propertiesandusesof Halogen derivatives of hydrocarbons |  |
| 16 | 31 | Revisionandclasstest | Vivavoce |
|  | 32 | Generalintroduction,preparationandproperti esandusesof:8.1 Methyl alcohol, Ethyl alcohol |  |
| 17 | 33 | Generalintroduction,preparationandproperties And uses of glycerol | 8.EstimationofCarbohydratesby benedicts |
|  | 34 | 8.2Diethylether |  |
| 18 | 35 | Revisionandclasstest | Vivavoce |
|  | 36 | Generalintroduction,classification,propertiesand usesof:9.1Methanaland ethanal |  |
| 19 | 37 | 9.2a)Structureofaminesgroups(pri,secandter) | 9.Estimationofproteinsby Acitic acid |
|  | 38 | b)Importantmethods,preparationandproperties |  |
| 20 | 39 | Revisionandclass test | Estimationofproteins bySalphosalicylicacid test |
|  | 40 | Carbohydrates10.1.Definition |  |
| 21 | 41 | 10.2.Composition,sourcesitsimportance | Vivavoce |
|  | 42 | 10.3.Classification |  |
| 22 | 43 | 10.4.Estimation | 10.Estimationoflipidsby directmethod |
|  | 44 | 10.5.Importantmono,di,polysaccharides |  |
| 23 | 45 | Revisionandclasstest |  |
|  | 46 | Lipids11.1.Definition11.2.Classification |  |
| 24 | 47 | 11.4.Clinicalimportanceoflipids11.3.Introductio ntofattyacids,phospholipids, |  |
|  | 48 | triglycerides,Cholesterol |  |

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| 25 | 49 | Revisionandassignmenttest |  |
|  | 50 | Proteins12.1.Definition12.2.Classification |  |
| 26 | 51 | 12.3.Compositon,molecularweightand hydrolysis12.4.Nameofvariousaminoacids |  |
|  | 52 | 12.5.Structureandpropertiesofproteins |  |
| 27 | 53 | 12.6.Clinicalimportanceofproteins |  |
|  | 54 | 13.Enzymes13.1Definition |  |
| 28 | 55 | 13.2Classification |  |
|  | 56 | * 1. Chemicalnatureofenzymes
	2. PropertiesofEnzymes
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| 29 | 57 | * 1. Factorsaffectingenzymeactivity
	2. ClinicalImportanceofEnzyme
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|  | 58 | Revisionandclasstest |  |
| 30 | 59 | Revisionandclasstest |  |
|  | 60 | Revisionandclasstest |  |