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Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada

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| **BLOCK :**  | **E-BLOCK** |
| **FLOOR :**  | **GROUND FLOOR** |
| **ROOM NO:**  | **E-004** |
| **ROOM SIZE (in Sq. mtrs):** | **90** |
| **LAB NAME:** | **ENGINEERING/APPLIED CHEMISTRY** |
| **FANS :**  | **5** |
| **TUBE LIGHTS :**  | **4** |
| **CHAIRS &STOOLS:**  | **2&46** |
| **STAFF TABLES :**  | **1** |
| **EXPERIMENT TABLES :**  | **3** |
| **CLOSED IRON RACKS :**  | **2** |
| **WOODEN CLOSED RACKS :** | **1** |
| **Others:** | **NO** |

**LAB SPECIFICATIONS**

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| **SI.No.** | **LAB APPARATUS/EQUIPMENT** | **No. AVAILABLE** |
| **1** | PH Meters | 3 |
| **2** | Electrodes | **2** |
| **3** | Colorimeter | 7 |
| **4** | Digital Balance | **3** |
| **5** | Turbidity Meter | **3** |
| **6** | Conductivity Meter | **6** |
| **7** | Tissue paper Rolls | 10 |
| **8** | Burners | 26 |
| **9** | Burrette Stands | 33 |
| **10** | Tripod Stands | **21** |
| **11** | Rubber Tubes | **16** |
| **12** | Wash Bottles | **36** |
| **13** | China Dish | 25 |
| **14** | Round Bottom Flask ( 250 ml ) | 57 |
| **15** | Round Bottom Flask (100 ml) | 29 |
| **16** | Round Bottom Flask ( 500 ml ) | 5 |
| **17** | Water condensers | **4** |
| **18** | Air Condensers | **3** |
| **19** | Heaters (mandle) | **3** |
| **20** | Potentiometers | **3** |
| **21** | Burette stands | **33** |
| **22** | Viscosity Apparatus | **2** |
| **23** | Thermo Meters | **7** |
| **24** | Weighing Bottle | 58 |
| **25** | Spatulas | 9 |
| **26** | Glass Rods | 20 |
| **27** | Beakeres ( 1000 ml ) | 3 |
| **28** | Beakeres (500 ml ) | 59 |
| **29** | Beakeres ( 250 ml ) | 68 |
| **30** | Beakeres (100 ml ) | 114 |
| **31** | Reagent Bottles | **16** |
| **32** | Tongs | **32** |
| **33** | Glass Electrodes | **4** |
| **34** | FUNNEL BIG | **10** |
| **35** |  Funnel MEDIUM | **13** |
| **36** |  Funnel SMALL | **17** |
| **37** | Volumetric flask ( 1000 ml ) | **9** |
| **38** | Volumetric flask (500 ml ) | **16** |
| **39** | Volumetric flask ( 250 ml ) | **40** |
| **40** | Volumetric flask (100 ml | **38** |
| **41** | Burettes | **49** |
| **42** | Conical flask | **92** |
| **43** | Analytical weighing Boxes | **5** |
| **44** | Analytical balances | **20** |
| **45** | DESSICATORS | **3** |
| **46** | CONICAL FLASK Narrow | **21** |
| **47** | Pipette ( 10 ml ) | **10** |
| **48** | Pipette ( 20 ml ) | 41  |
| **49** | Pipette ( 25 ml ) | 9  |
| **50** | Pipette ( 1 ml ) | **7** |
| **51** | Spring balances | 19 |
| **52** | TEST TUBES ( 15 X 125 )  | 65 |
| **53** | TEST TUBES (18 X 150 | 75  |
| **54** | BOD INCUBATOR | 1 |
| **55** | COD INCUBATOR | 1 |
| **56** | HEATING MANTLES | 2 |
| **57** | AIR FLOW CHAMBER | 1 |

**LAB SPECIFICATIONS**

**CHEMICALS/CONSUMABLES**

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| **SI.No.** | **NAME OF THE CHEMICAL** | **QUANTITY** |
| **1** | AmmoniaSolution  | 7.5L |
| **2** | Ammonium chloride | **10.5Kgs** |
| **3** | Ammonium thiocyanate | **500g** |
| **4** | Mohrs Salt  | **7Kgs** |
| **5** | Acetic acid | **5L** |
| **6** | Buffer capsules | **16** |
| **7** | BUFFER POWDER  | 6 |
| **8** | Calcium carbonate | 2Kgs |
| **9** | Copper II sulfate pentahydrate pure | 4.5Kgs |
| **10** | Diphenyl amine | **800gms** |
| **11** | EDTA salt | 4.5Kgs |
| **12** | Solocrome | **125 gms** |
| **13** | Sulphuric Acid  | 10L |
| **14** | Hydro chloric acid | 5L |
| **15** | Nitric acid | 10L |
| **16** | Orthophosphoric acid | 3L |
| **17** | Formaldehyde solution | **5L** |
| **18** | Universal indicator | **2L** |
| **19** | Barium sulphate | **4Kgs** |
| **20** | Ferric chloride | **1Kg** |
| **21** | Magnesium sulphate | **2Kgs** |
| **22** | Potassium flouride | **500gms** |
| **23** | Methyl orange  | **4\*125 ml** |
| **24** | Methyl Red  | 25gms |
| **25** | Mercury II Chloride | 4\*125ml |
| **26** | Ascorbic Acid | 100gms |
| **27** | Hydrazine sulphate | 300gms |
| **28** | Sodium azide | 50gms |
| **29** | Stannous chloride | 200gms |
| **30** | Quinhydrone | 50gms |
| **31** | Oxalic acid | **4kgs** |
| **32** | Sodium carbonate  | **8.1kgs** |
| **33** | Potassium permanganate | **4Kgs** |
| **34** | Sodium Hydraoxide flakes , powder&pelletes | **8.1Kgs** |
| **35** |  Starch Solution | **1kg** |
| **36** | Phenphthalin indicator | **125ml** |
| **37** | Phenphthalin indicator | **350gms** |
| **38** | Silver Nitrate | **50gms** |
| **39** | Potassium chromate | **500gms** |
| **40** | Ammonium acetate | **1kg** |
| **41** | POTASSIUM HYDROGEN ORTHOPHOSPHATE  | **200gms** |
| **42** | Fastsulfoneblack | **50gms** |
| **43** | Hydraziniumsulphate | **100gms** |
| **44** | Ferrous sulphate | **700gms** |
| **45** | Sodium Hydrogen Corbonate | **1kg** |
| **46** | Sodium Acetate | **650gms** |
| **47** | Sodium nitrate | **1kg** |
| **48** | Sodium chloride | **500gms** |
| **49** | Sodium Nitrate | 2kgs  |
| **50** | Sodium sulphate | 1kg |
| **51** | Sodium Thiosulphate | **3kgs** |
| **52** | POTASSIUM NITRATE | 500gms |
| **53** | Potassium carbonate | 1kg |
| **54** | Potassium Ferricynide | 1.5kg |
| **55** | Potassium Iodide | 1.2kg |
| **56** | Potassium Dichromate | 2.5kgs |
| **57** | Potassium Ferrocynide | 1kg |
| **58** | Potassium Hydroxide | 600gms |
| **59** | Potassium Chloride | 500gms |
| **60** | Zinc Sulphate | 2kgs |
| **61** | Zinc Powder Pure | 500gms |
| **62** | Magnesium sulphate | 3kgs |
| **63** | Potassium hydrogen phthalate | 500gms |
| **64** | Ammonium purpurate | 5gms |
| **65** | Ferroin indicator | 100ml |
| **66** | SODIUM TETRA BORATE DECAHYDRATE | 500gms |
| **67** | TRIETHYL AMINE | 500ml |
| **68** | PHENOL  | 500gms |
| **69** | propanol | 500gms |
| **70** | SODIUMCARBONATE  | 500gms |
| **71** | MURAXIDE  | 500gms |
| **72** | Hexamine | 500gms |
| **73** | Calcium chloride | 500gms |
| **74** | ERIOCHROME BLACK-T  | 75gms |
| **75** | SULFONYLIC ACID  | 25gms |

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| **SL.NO** | **NAME OF THE EXPERIMENT** | **EQUIPMENT @CHEMICALSREQUIRED** |
| **1** | Introduction To Chemistry Laboratory  | Demonstration On Lab |
| **2** | Estimation Of Hcl Using Standard Sodium Carbonate Solution | Burette,Pipette,ConicalFlask,Beakers, Hcl,SodiumCarbonate,Methyl Orange Indicator |
| **3** | Estimation Of Kmno4 Using Standard Oxalic Acid Solution | Burette,Pipette,ConicalFlask,Beakers, Kmno4 ,Oxalic Acid,Sulphuric Acid |
| **4** | Estimation Of Ferric Iron Using Standard Potassium Dichromate Solution | Burette,Pipette,ConicalFlask,Beakers, Potassium Dichromate Solution, Ferric Chloride ,Stannous Chloride,Mercury Chloride ,.Sulphuric Acid, Diphenyl Amine. |
| **5** | Estimation Of Copper Using Standard Potassium Dichromate Solution | Burette,Pipette,ConicalFlask,Beakers, Potassium Dichromate Solution, Ki, Copper Sulphate,Starch,Sodium Carbonate,Nh4oh, Acetic Acid, |
| **6** | Estimation Of Total Hardness Of Water Using Standard EDTA Solution | Burette ,Pipette, Conical Flask, Beakers, Edta,Ebt,Caco3, Nh4cl, Ammonia,Mgso4 |
| **7** | Estimation Of Copper Using Standard EDTA Solution | Burette,Pipette,ConicalFlask,Beakers, Mgso4,Edta, Ebt, Nh3,Fast Sulphonic Black-T Indicator, |
| **8** | Estimation Of Copper Using Colorimeter | Colorimeter, Volumetric Flask, Beakers,Cuso4,Sulphuric Acid, Nh4oh,Acetic Acid, |
| **9** | Estimation Of Ph Of The Given Sample Solution Using PH Meter  | Ph Meter, Ph Papers ,Beakers, Universal Indicator ,Buffer Capsuls, |
| **10** | Conductometric Titration Between Strong Acid @Strong Base | Conductometer ,Conductivity Cell, Hcl, Naoh |
| **11** | Conductometric Titration Between Strong Acid @Weak Base | Conductometer ,Conductivity Cell, HCL,NH 4OH |
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 | Potentiometric Titration Between Strong Acid @Strong Base | Potentiometer, Glass Electrode,Calomel Electrode, Hcl, NaOH |
| **13** | Potentiometric Titration Between Strong Acid @Weak Base | Potentiometer, Glass Electrode,Calomel Electrode, Hcl, NH4OH |
| **14** | Estimation Of Zinc Using Standard Potassium Ferro Cyanide Solution | Burette, Pipette ,ConicalFlask,Beakers, Zinc Sulphate ,DPA ,Potassium Ferro Cynide, Sulphuric Acid, Ammonium Chloride . |
| **15** | Estimation Of Vitamin -C | Burette,Pipette,ConicalFlask,Beakers, Measuring Jar, Funnel, Weighting Bottles, Vitamin C Tablets.Ki, Starch, Potassium Iodide. |