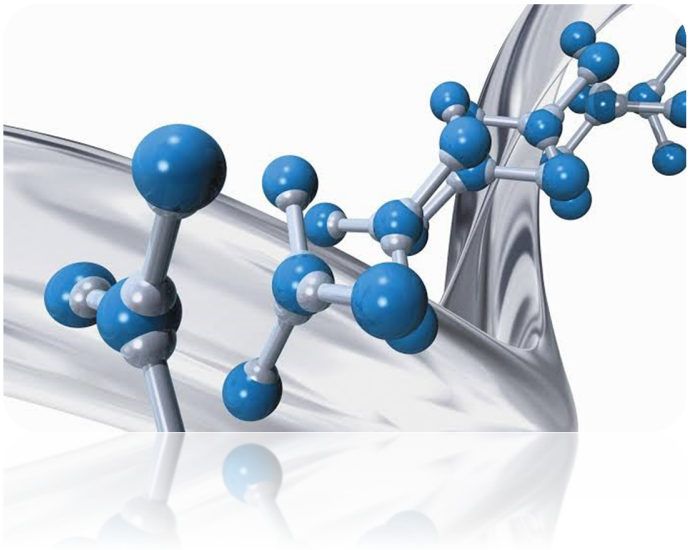
[LOYOLA COLLEGE KUNKURI]

[Annual Report-2018-19]

[Department Of Chemistry]



KUNKURI, DIST.- JASHPUR, CHHITTISHGARH (496225)

Contents

"Department of Chemistry"

We are surrounded everyday by Chemistry. So what role does Chemistry really play in everyday life . Science has much discipline. Chemistry is one of them. It is one of the basic or fundamental sciences. And the knowledge of Chemistry is often called the central science because it is vital in the science of Physics and Biology. Chemical and their study famously known as Chemistry is an integrate part of life. It would be very interesting to understand a few things taking into account that we never have the time or patience to look upon it with this view. there is nothing without Chemistry everything we do in this subject and chemical reaction take when we breath, eat, and drink. We use chemical everyday and perform chemical reactions without thinking much about them. Chemistry is important because everything we do in chemistry. Even our body is made up of chemical.

Hence, Chemistry is inevitable from anything one does. It help to understand the composition, structure and changes of matters. It is a wide ranging science which is basically concerned with matter at the atomic and molecular scale. The important facts are synthesis, structure, microscopic, mechanisms properties, analysis and transformation of all types materials. Does a good Chemistry degree opens the door to inexpensive choice of careers and won't be diminished over time so it will remain a promising career part always.

The Chemistry Laboratory is designed to support and illustrate chemical concepts studied in the lecture portion of the course as well as to introduce important laboratory technique and encourage analytic thinking. the laboratory equipment refers to the various tools and equipment used by scientists working in the laboratory.

Vision

To become an institute of academic excellence.

Mission

- Impart quality education alone with industrial exposure.
- To undertake research activities relevant to industrial and professional needs.
- Promote entrepreneurship and value added education that is socially relevant with economic benefits.

Chemistry Lab

Chemistry is the scientific discipline involved with compounds composed of atoms, elements and molecules combinations of atoms their composition, structure, properties, behavior and changes they undergo during a reaction with other compounds Chemistry addresses topics such as how atoms and molecule interact via chemical bonds to form new chemical compounds. There are 4 type of chemical bond: covalent bonds in which compound share one or more electron.

Chemistry panels are groups of tests that are routinely ordered to determine a person's general health status. They help evaluate, for example; the body's electrolytes balance and or the status of several major body organs. The tests are performed on a blood sample usually drawn from a vein in the arm.

Chemistry is also the study of matters compositions structures and properties. Matter is essentially anything in the world that takes up space and has mass. Chemistry is sometimes called "the central science", because it bridges

physics with other natural science, such as Geology and Biology.

The science that systematically studies the composition, properties and activity of organic and inorganic substance and various elementary forms of matter.

S 

Physical Chemistry combines Chemistry with physics, Physical Chemists Study how matter and energy interact. Inorganic Chemistry studies materials such as metals and gases that do not have carbon as part of their makeup.

DEPARTMENT OF CHEMISTRY INSTRUMENTS

S.NO.	INSTRUMENT NAME	NUMBER
1	DIGITAL SPECTROPHOTOMETER	1
2	MELTING POINT APPARATUS	1
3	ELECTRICAL WEIGHT BOX	1
4	DIGITAL CONDUCTIVITYMETER	1
5	H2S GAS APPARATUS	2
6	DISTILATION APPARATUS	1
7	AUTO-CUT-OFF DEVICE	1
8	ELECTRIC BURNER	2
9	PHYSICAL BALANCE	2
10	WATER BATH	2

GLASS & OTHER APPARATUS-

S. No.	Glass Apparatus	S.No.	Other
01	Beaker(500,250,100ml)	1	Tripod stand
02	Conical Flask (500,250,100ml)	2	Water bath
03	Burette	3	Starch indicator
04	Test tube	4	Filter paper
05	Measuring cylinder	5	Stop watch
06	Watch glass	6	Brush
07	Round Bottom flask	7	Test tube stand
08	Reagent bottle	8	Burette stand
09	viscometer	9	Spatula
10	Rod	10	Wire gauge
11	Cuvette	11	Desecrator
12	Chromatography Jar	12	Forceps
13	Stalagnometer	13	Test tube holder
14	China dish	14	Burner
15	Thermometer	15	Capillary tube
16	Dropper	**16**	Firefox
17	Porcelain Pyali		

Contacts of communication

Designation	Name	Mo.No.	E Mail Id.
Asst. Professor	Chandra Kindo	-	@gmail.com
Asst. Professor	Rinky kumari jaiswal	-	@gmail.com
Lab Assistant	Rashmi gupta	-	@gmail.com

Departmental Information

Details of programs offered by the department:

Program	Course	Duration	Intra	Medium	No. of

Level		in months	Qualification	of Instruction	students admitted
U.G.	B.Sc.	36	12th	Hindi /English	357

Teaching Faculty

Name	Paper-I	Paper-II	Paper-III
Chandra Kindo	✓	✓	-
Rinki kumari jaiswal	-	✓	✓

Lab-Assistant

Name	Rashmi Gupta

Student

No. of student in year wise- 2018-19

B.Sc.-I	B.Sc.-II	B.Sc.-III
174	**97**	**86**

No. of outgoing students in year wise- 2018-19

B.Sc.-III	86

- **Framework**

- **Classes:** Admission of new students started from 01st July. And classes were beginning from next date of admission. And they get aware of schedule and different activities of the laboratory and syllabus also.

- **Lectures:** Lectures are used to convey information, history background, and theories. Lectures are used to expose the students to contemporary issues and the need for life- long learning in the appropriate societal context.

- **Class presentation:** Presentation are given to illustrate ideas and concept and also seminar given by students from effectively communicate.

- **Remedial classes:** The remedial class help the students and developing better understanding of the subject and clarifying their doubts that could not be taken during lecture and problem solving abilities.

- **Lab experimental work:** Laboratory work demonstrates how theory of Inorganic, Organic, and physical chemistry can be verified by experiments through interpretation of results.

- **Seminar**- In final, second and first year student have seminar in their curriculum. The students have select a recent and innovative topic and present in front of seminar coordinates department faculty and their class students. The seminar presentation assessed based on:
    - Topic selection

- Presentation
- Report preparation

- **Guest lecture**
- **Model & Assignments We conducted departmental meeting in every month.**

- **We organize practical exam for department of chemistry in the month of July.**

- **Cultural program:**
  i. We celebrated Christmas gathering. **(22nd December 2020**)
  ii. We celebrated Republic day .**(26th January 2021)**
  iii. Fresher party for all first year students. **(30th January 2021)**
  iv. We celebrated Women's day. **(8th March 2021**)

- **Subject details**

Class	Paper-I	Paper-II	Paper-III
B.Sc.-I	Inorganic Chemistry	Organic Chemistry	Physical chemistry
B.Sc.-II	Inorganic Chemistry	Organic Chemistry	Physical chemistry
B.Sc.-III	Inorganic Chemistry	Organic Chemistry	Physical chemistry

File Description

Test series

Day/time	B.Sc.-I
15/08/2018	UNIT TEST-01
25/09/2018	UNIT TEST-02
16/12/2018	UNIT TEST-03
23/1/2019	UNIT TEST-04

16/2/2019	UNIT TEST-05

Day/time	B.Sc.-II
22/08/2018	UNIT TEST-01
20/09/2018	UNIT TEST-02
10/12/2018	UNIT TEST-03
02/02/2019	UNIT TEST-04
18/02/2019	UNIT TEST-05

Day/time	B.Sc.-III
18/08/2018	UNIT TEST-01
22/09/2018	UNIT TEST-02
11/12/2018	UNIT TEST-03
15/02/2019	UNIT TEST-04
19/02/2019	UNIT TEST-05

Question paper-

Model exam-

Practical Exam

0/02/2019	B.Sc.-I
0/02/2019	B.Sc.-II
0/02/2019	B.Sc.-III

Teaching / learning process

The following are the various student centric methods to enhance.

Course delivery methods

- Lectures
- Class presentations
- Tutorials
- Lab experimental work
- Written assignments
- Seminar
- Guest lecture

LOYOLA COLLEGE
KUNKURI
SESSION 2018-2019
DEPARTMENT OF
CHEMISTRY

S.no	Apparatus Name (8/3/2018)	QUANTITY	PRICE	AMOUNT
1	Distillation Apparatus coil	01 pc	4200	
S.no	Chemical Name (29/8/2018)	Quantity	PRICE	AMOUNT
1	Test tube 6*1 Borosil	1 pak	3422	3422.00
2	Test tube 5*5/8 Borosil	1 pak	1888	1888.00
3	Ethanol	5X500ml	2000	400.00
4	Methanol	500ml	300	300.00
5	Oxalic Acid	500gm	342	342.00
6	Thermometer	10 pc	2290	229.00
7	Burate	20 pc	7600	380.00
8	Cork (mixed)(Rubber Cork)	20 pc	200	10.00
			TOTAL-18042	
			GRAND-TOTAL-22242.00	

LOYOLA COLLEGE KUNKURI

DEPARTMENT OF CHEMISTRY

SESSION – 2018-19

B.Sc. I YEAR

HEAD OF DEPARTMENT - CHANDRA KINDO

ASST.PROF. - RINKY JAISWAL

LAB . TECH. - RASHMI GUPTA

EXPERIMENT-LIST(B.Sc.I,II,III)YEAR

1 . Determination of Melting Point of Various Organic Compounds. (**Naphthaline, Benzoic acid , Urea, Succinic acid, Cinnamic acid, Salycilic acid, Acetanilide, m. Dinitrobenzene, p. Dichlorobenzene, Asprine.)**

2 . Determination of Boiling Point of Some Organic Compound**. (Ethanol, Cyclohexane, Toluene, Benzene, Distilled water.)**

3 . To Identify Two Acid and Two Base Radicals in an Unknown Given Inorganic Compound **.(Ferric Chloride Barium Carbonate)**

4 . To Identify Two Acid and Two Base Radicals in an Unknown Given Inorganic Compound **. (Nickle Shulphate , Ammonium Chloride)**

5 . To Identify Two Acid and Two Base Radicals in an Unknown Given Inorganic Compound . **(Calcium Bromide , Aluminium Shulphate)**

6 . To Identify Two Acid and Two Base Radicals in an Unknown Given Inorganic Compound **. (Lead Acetate , Manganese Chloride)**

7 . To Identify Two Acid and Two Base Radicals in an Unknown Given Inorganic Compound . **(Silver Sulfate ,Calcium Carbonate)**

8 . To Determine the Element and Functional Group in the Unknown Given Organic Compound **. (Oxalic Acid)**

9 . To Determine the Element and Functional Group in the Unknown Given Organic Compound **.(Glucose)**

10 . To Determine the Element and Functional Group in the Unknown Given Organic Compound **.(Methyl Alcohol)**

11. To Determine the Element and Functional Group in the Unknown Given Organic Compound **.(Acetone)**

12 . To Determine the Element and Functional Group in the Unknown Given Organic Compound **.(Resorcinol)**

13 . To Determine the Percentage Composition of a Binary Mixture By **Viscosity Method** .

14 . To Determine of **Surface Tension** By Drop Number Method .

REQUIRMENTS & CHEMICAL-

S.No.	**Requirement**	Amount
1	Beaker	Nil
2	Tripod stand	Nil
3	Measuring cylinder	Nil
4	Funnel	Nil
5	Filter paper	Nil
6	Water bath	Nil
7	Burner	Nil
8	Test- tube	34.00
9	Ignition tube	Nil
10	Red Litmus paper	Nil
11	Watch glass	Nil
12	Brush	Nil
13	Conical Flask	Nil
14	Round bottom flask	Nil

15	China-dish	Nil
16	Test-tube stand	Nil
18	Holder	Nil
19	Glass stirrer rod	Nil
20	Thermometer	229.00
21	Blue Litmus Paper	Nil
22	Pipette	Nil
23	Dropper	Nil
24	Spatula	Nil
25	Viscometer	Nil
26	Stalagmometer	Nil
27	PH Paper	Nil

S.No.	Chemical	Amount
1	Lead Acetate	728.00
2	Potassium Chromate	Nil
3	Manganese Dioxide	Nil
4	Ethanol	400.00
5	Oxalic acid	342.00
6	Potassium dichromate	Nil
7	Copper sulphate	Nil
8	Con. Sulphuric acid	Nil
9	Con. Hydrochloric acid	Nil
10	Con. Nitric acid	Nil
11	Acetone	Nil
12	Methyl Orange	Nil
13	Phenol	Nil
14	Bromine Water	Nil
15	Copper Metal turning	Nil
16	Potassium paramagnet	Nil
17	Methanol	Nil
18	Sodium Hydroxide	Nil
19	Cerric Ammonium Nitrate	Nil
20	Ferric chloride	Nil
21	Alpha Napthol	Nil
22	Acetic Acid	Nil
23	Ammonium Chloride	Nil
24	Ammonium Oxalate	Nil
25	Ferrous Shulphate	Nil
26	Potassium Iodide	Nil
27	Nessler’s Reagent	Nil
28	Silver Nitrate	Nil
29	Sodium Chloride	Nil
30	Potassium Hydroxide	Nil

31	Ferrous Sulphide Stics	Nil
32	Naphthalene	Nil
32	Benzoic Acid	Nil
33	Urea	Nil
34	Succinic Acid	Nil
35	Cinnemic Acid	Nil
36	Salicylic Acid	Nil
37	Acetanilide	Nil
38	m-dinitrobenzene	Nil
39	p- dichlorobenzene	Nil
40	Aspirin	Nil
41	Cyclohexane	Nil
42	Toluene	Nil
43	Benzene	Nil
44	Barium Carbonate	Nil
45	Nickel Sulphate	Nil
46	Calcium Bromide	Nil
47	Aluminum Sulphate	Nil
48	Manganese Chloride	Nil
49	Silver sulphate	Nil
50	Calcium Carbonate	Nil

S.no	**instrument**	**Amount**
1	Melting Point Apparatus	Nil
2	H2s Gas Apparatus	Nil
3	Distillation Apparatus	Nil

LOYOLA COLLEGE KUNKURI

DEPARTMENT OF CHEMISTRY

SESSION-2018-19

B.Sc. II YEAR

HEAD OF DEPARTMENT	-	CHANDRA KINDO
ASST.PROF.	-	RINKY JAISWAL
LAB . TECH.	-	RASHMI GUPTA

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1 . Determination of Alkali content **antacid tablet using HCl.**

2 . Separation of **Green leaf pigment by paper chromatography.**

3 . Determination of the **Transition Temperature of Mncl2,4H2o.**

4 . To Determine the Concentration of NaCl by Studying the Mutual **Solubility of phenol and water system.**

5 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Glucose)

6 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Oxalic Acid)

7 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Alpha Naphthol)

8 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Acetone)

9 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Urea)

10 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Napthaline)

11 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Ethanol)

12 . Identification of Functional and Element Group in an Unknown Organic Compound.

(Acetaldehyde)

13 . Identification of Functional and Element Group in an Unknown Organic Compound**.(Resorcinol)**

REQUIRMENT & CHEMICAL-

S.No.	**Requirement**	**Amount**
1	Beaker	Nil
2	Tripod stand	Nil
3	Desecrater	Nil
4	Funnel	Nil
5	Filter paper	Nil
6	Water bath	Nil
7	Burner	Nil
8	Test- tube	Nil
9	Ignition tube	Nil
10	Red Litmus paper	Nil
11	Watch glass	Nil
12	Brush	Nil
13	Flask	Nil
14	Round bottom flask	Nil
15	China-dish	Nil
16	Test-tube Brush	Nil
17	Test-tube stand	Nil
18	Holder	Nil
19	Capillary tube	Nil
20	Thermometer	Nil

21	Burette	Nil
22	Pipette	Nil
23	Burette-stand	Nil
24	Dropper	Nil
25	Spatula	Nil
26	Blue Litmus Paper	Nil
27	PH Paper	Nil

S.No.	**Chemical**	**Amount**
1	Potassium Chromate	Nil
2	Cupper Shulphate	Nil
3	Con. Ammonia	Nil
4	Ethanol	400.00
5	Oxalic acid	342.00
6	Potassium dichromate	Nil
7	Copper Metal turning	Nil
8	Con. Sulphuric acid	Nil
9	Con. Hydrochloric acid	Nil
10	Con. Nitric acid	Nil
11	Acetone	Nil
12	Nitrobenzene	Nil
13	Phenol	Nil
14	Bromine water	Nil
15	N-Butanol	Nil
16	Silica-gel	Nil
17	Mercuric Chloride	Nil
18	Sodium hydroxide	Nil
19	Cerric ammonium nitrate	Nil
20	Ferric chloride	Nil
21	Alpha napthol	Nil
22	Nacl	Nil
23	Cupper Turning	Nil
24	2,4 Dinitrophenil Hydrazine	Nil
25	Benzene	Nil
26	Naphthalene	Nil
27	Glucose	Nil
28	Acetaldehyde	Nil
29	Urea	Nil
30	Piece of Sodium	Nil

S.no	Instrument	Amount
1	Distillation Apparatus	Nil

LOYOLA COLLEGE KUNKURI

DEPARTMENT OF CHEMISTRY

Session -2018-2019

B.SC III YEAR

HEAD OF DEPARTMENT - CHANDRA KINDO

ASST.PROF. - RINKY JAISWAL

LAB . TECH. - RASHMI GUPTA

Object 1 – To Synthesize Nickel Di-Methylglyoxime [ni(dmg)2] .

Object 2 – To Synthesize Trans-Potassium Dioxalato Diaqua Chromate(3)ion k[cr(c2o4)2(H2o).

Object 3 – To Synthesize Tetra Amine Cupric Sulphate[cu(NH3)4so4]H2O.

Object 4 – To Synthesize Iodofrom Acetone o Ethyl Alcohol by Aliphatic Electrophilic Substitution.

Object 5 – To Synthesize 2,4,6,Tribromophenol from Phenol by Aromatic Electrophilic Substitution.

Object 6 – To Separate the Given Organic Mixture and its Identification.(Oxalic acid ,Benzoic acid)

Object 7 – To Separate the Given Organic Mixture and its identification.(Urea , Naphthalene)

Object 8 – To Separate the Given Organic Mixture and its identification.(Acetone ,Ethyl Alcohol)

Object 9 – To Separate the Given Organic Mixture and its identification.(Glucose, Theo-urea)

Object 10 – To Separate the Given Organic Mixture and its identification.(Nitrobenzene, **Benzene)**

Object 11 – To Separate the Given Organic Mixture and its identification.(Salicylic acid, Resorcinol)

Object 12 – To Separate the Given Organic Mixture and its identification.(Ethyl acetate ,Aniline)

Object 13 – To Verify Beer's Lambert low by Using a Spectrophotometer for colored solution of a

Substance (K2cr2o7 or kmno4).

Object 14 – To Determine the Strength of Given acid (approx 0.1m HCl) by Titrating it Against NaOH

Solution By Conductivity Method .

Object 15 – Estimation of Barium as Barium Sulphate .

REQUIRMENTS &CHEMICAL-

S.No.	Requirement	Amount
1	Beaker	Nil
2	Tripod stand	Nil
3	Desecrater	Nil
4	Funnel	Nil
5	Filter paper	Nil
6	Water bath	Nil
7	Burner	Nil
8	Test- tube	34.00
9	Ignition tube	Nil
10	Litmus paper	Nil
11	Watch glass	Nil
12	Brush	Nil
13	Conical Flask	Nil
14	Round bottom flask	Nil
15	China-dish	Nil
16	Blue –Litmus Paper	Nil
17	Test-tube stand	Nil
18	Holder	Nil
19	Dropper	Nil
20	Spatula	Nil

S.No.	Chemical	Amount
1	Nickel sulphate	Nil

2	Dimethyl glyoxime	Nil
3	Con. Ammonia	Nil
4	Ethanol	400.00
5	Oxalic acid	342.00
6	Potassium dichromate	Nil
7	Copper sulphate	Nil
8	Con. Sulphuric acid	Nil
9	Con. Hydrochloric acid	Nil
10	Con. Nitric acid	Nil
11	Acetone	Nil
12	Iodine cristal	Nil
13	Phenol	Nil
14	Bromine water	Nil
15	Silver Nitrate	Nil
16	Acetaldehyde	Nil
17	Mercuric chloride	Nil
18	Sodium hydroxide	Nil
19	Cerric ammonium nitrate	Nil
20	Ferric chloride	Nil
21	Alpha napthol	Nil
22	Lead Acetate	Nil
23	Copper-Metal turning	Nil
24	Benzoic Acid	Nil
25	Urea	Nil
26	Naphthalene	Nil
27	Glucose	Nil
28	Theo-Urea	Nil
29	Nitrobenzene	Nil
30	Benzene	Nil
31	Salicylic Acid	Nil
32	Resorcinol	Nil
32	Ethyl Acetate	Nil
33	Piece of Sodium	Nil
34	Aniline	Nil

S.No.	**Instrument**	**Amount**
1	Spectrophotometer	Nil
2	Conductometer	Nil
3	Distillation Apparatus	Nil