

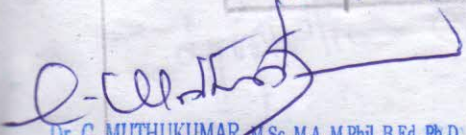
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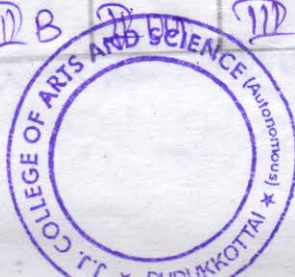
Lesson plan Note: June 2020 - Dec - 2020.


General Chemistry - IV (U3R1CHCC5) II B.Sc Chemistry

Physical Chemistry - I (U2R1CHCC10) II B.Sc Chemistry

Day	1	2	3	4	5
Q1	III B	III A			
Q2		IIU	III A	III B	
Q3	IIU	III A	IIU	III B	IIU
Q4				III (A)	
Q5				III (B)	III (A)
Q6	IIU	III B		III B	IIU


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Date : 01

Day order : 3.8.20

Topic : Colloidal Solution

Colloidal Solution are Intermediate between true and Suspension Solution

The dispersed particles in a colloidal solution are more than that of true solution and smaller than that of Suspension.

A Colloid is a mixture in which one substance of microscopically dispersed insoluble particles are suspended throughout another substance.

Date

4.8.20

Day order

02

Topic : Lyophobic colloids

Lyophobic Colloids are the Colloidal Solution

in which the dispersed phase (or) the particles have a very strong affinity with the liquid.

The Solution of this Colloid is known as Lyophobic Sol. These can be easily prepared

by Direct Mixing (or) heating. The

Lyophobic Sols are reversible in nature.

Date : 5.8.20

Day order : Q3

Topic : Lyophobic Colloids.

Lyophobic colloids are the colloidal solution in which the dispersed phase has very little affinity for the dispersion medium. The solution of this colloid is known as lyophobic sol and cannot be directly prepared.

Date : 6.8.20

Day order : Q4

Topic : Gold Number

The number of milligrams of a hydrophilic colloid that will just prevent the precipitation of 10ml of 10 percentage solution of Stannous Chloride solution.

Gold Number is the amount of protective colloid in milligrams required to prevent the coagulation of 10ml of a standard hydro. gold sol when gold sol indicated by the colour change from red to blue or purple when the size of particle increases.

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Lesson plan Note : Jan 2021 - Mar 2021,

General Chemistry - V (U4R1CHCCT) II - BSc Chemistry

Industrial Chemistry (U6R1CHMBE2) III BSc Chemistry

Day	1	2	3	4	5
Q1	II U4C1	II U4C2			II U4C3
Q2	II U4C4		II U4C5	II U4C6	
Q3		II U4C7			II U4C8
Q4		II U4C9			II U4C10
Q5		II U4C11			II U4C12
Q6	II U4C13			II U4C14	II U4C15

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G. Par
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Date : 4-1-21

Day order : 01

Topic : Electron affinity and Electronegativity

The amount of energy released when an electron is attached to a neutral atom known as Electron affinity

The tendency of an atom in a molecule to attract the shared pair of electrons towards itself known as electronegativity

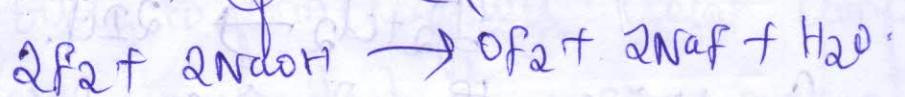
from left to right the nuclear charge increases and the atomic size decreases.

Date : 5-1-21

Day order : 01

Topic : preparation of oxygen difluoride

The reaction of fluorine with a dilute aqueous solution of sodium hydroxide with sodium fluoride.



It was made by the electrolysis of molten potassium fluoride and hydrofluoric acid. The chemical had a small amount of moisture.

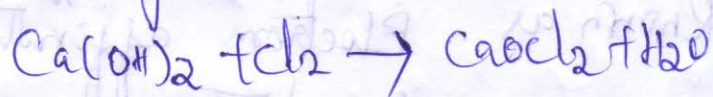
It is used for fluorinating agent.

Date : 6.1.21

Day order : 22

Topic : Bleaching powder

Chlorine gas through a solution of Calcium hydroxide



Bleaching powder contains 57. Sodium hypochloride

Bleaching powder is soluble in water and is used as bleaching agent in textile industries.

Date : 7.1.21

Day order : 22

Topic : preparation of I_2 and Br_2

Combination the halogen in 1:1 molar ratio according to the equation



Combining the bromine liquid and fluorine ratio according to the equation



This reaction is suitable for the preparation of large quantities and is carried out at temperatures over 150°C

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LESSON PLAN NOTE
 ODD SEMESTER - 2020
 SEP 2020 - DEC - 2020

PAPERS

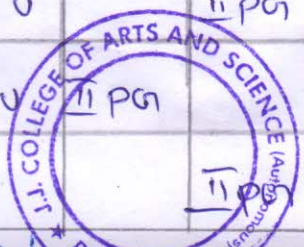
- * ORGANIC CHEMISTRY - I
- * PHYSICAL METHODS IN CHEMISTRY - II

DAY	1	2	3	4	5
D1	III U		II PG		II PG
D2		III U			II PG
D3		III U		III U	
D4	III U		II PG		
D5	III U	II PG		II PG	
D6			II PG		

G.D.

Q. Ullath

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4.9.20

DI-I

Carboxylic Acids - Types, Classification

Carbonyl + hydroxyl \rightarrow carboxyl

Types:

Aliphatic Ex: Formic Acid

Aromatic Ex: Benzoic Acid

Classification.

1 COOH group \rightarrow Mono carboxylic acid
2 COOH group \rightarrow Di carboxylic acid
3 COOH group \rightarrow Tri carboxylic acid

Preparation:

- * Industrial source
- * Laboratory Method

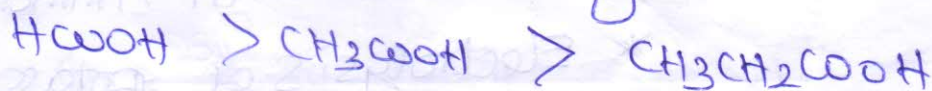
7.9.20

DI-II

Effect of substituents on acidity

Carboxylic acids are acidic and lose a proton readily because the carboxylate ion formed by ionisation on reaction with a base is stabilized by resonance.

Electron releasing alkyl group decrease the acidity.

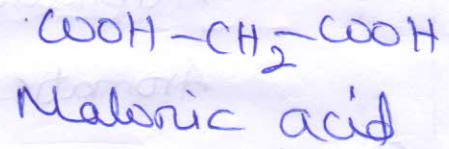
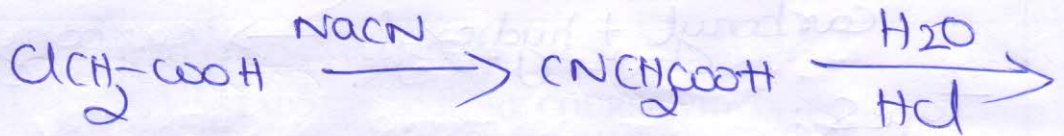


Electron withdrawing substituents increase the acidity.

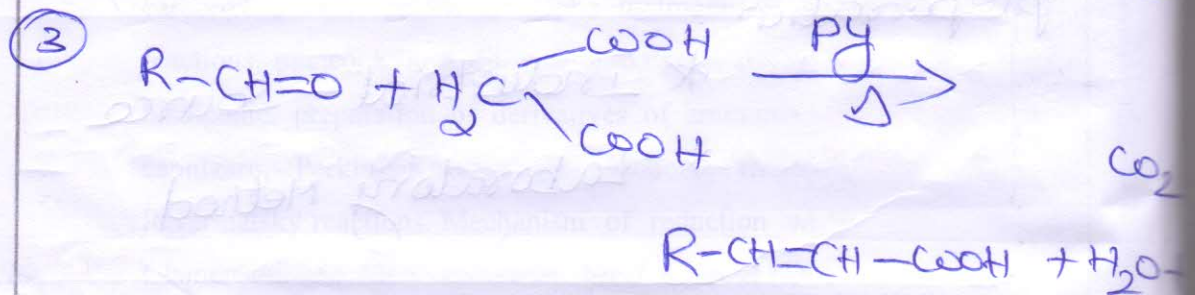
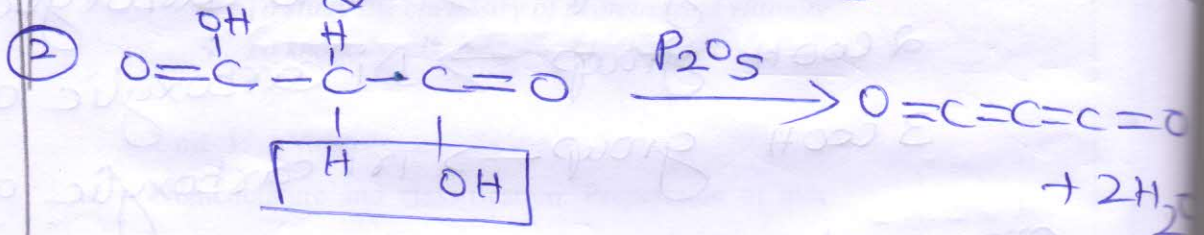
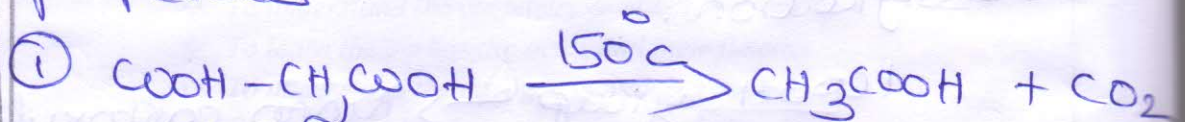
9.9.20

D3-II, IV

preparation and properties of Malonic acid



properties

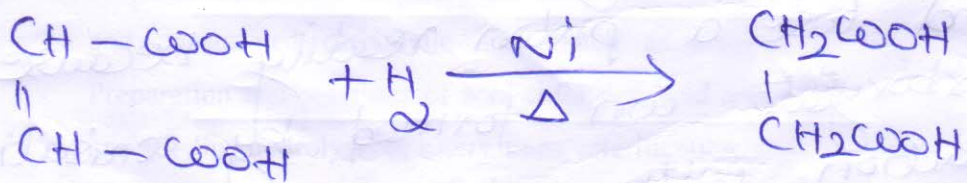


12.9.20

D4-I

Succinic Acid

preparation :



Maleic acid

properties:

- * Action of heat
- * Reaction with Ammonia
- * Electrolysis of potassium salt.

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LESSON PLAN NOTE : JAN 2021 - MAR 2021

HANDLED PAPFRS

- * Analytical chemistry (U6RCHMBE3) - III B.Sc Chemistry
- * physical Methods in chemistry - I (P2RICHCC6) - I.M.Sc Chemistry
- * Environmental science (U2RIEVS) I.B.Sc physical Education
- * General chemistry - III (U3RICHCC4) II B.Sc Chemistry

Day	1	2	3	4	5
D1	IIIUCN		IIIUCN	IPE	
D2					IIIUCN
D3	IPOI		IIA		IPOI
D4	IIIUCN	IPOI		IIIUCN	
D5	IPOI	IIIUCN		IIIUCN	IPOI
D6	← IIIUCN Organic / Gravimetric lab →				

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4.1.21
5.1.21
DI-I, III

Storage and Handling of Chemicals, First Aid procedure

* Chemicals which corrode or destroy gradually skin, wood, cloth, metal etc. are called corrosive chemicals. These are handled in corrosive resistant chambers, because they produce in effects creating health problems.

* In spite of the precautions, accidents occur in the laboratory. when accidents occur the students should know the first aid procedure that is to be given to the victim. Ex: 1) Acid in eye, 2) Acid burns 3. poisoning 4. Bromine burns etc

6.1.21
7.1.21
DI-V

Heating, Filtration and stirring Methods

* several methods of heating, filtration and stirring are commonly encountered in the laboratory.

<u>Heating</u>	<u>Stirring</u>	<u>Filtration</u>
* Burner	* By hand	* Filter paper
* Heating bath	* Magnetic Stirrer	* Gravity filtration
* Electric hot plate	* Mechanical Stirrer	* Hot filtration
		* Vacuum filtration.

* The difference between the value of a property and its accurate value is called error.

1. Determinate errors

2. Indeterminate errors.

Determinate errors are further divided into,

1. Instrument errors

2. Method errors

3. Personal errors

Determinate errors may also be classified as being either

1. Constant Errors

2. Proportional Errors

11.1.21

12.1.21

D4-I, IV

Mean, precision and Accuracy

* It is the degree of agreement two or more measured values of a property measured under identical conditions (precision).

* It is the degree of agreement between the measured value and the expected or true value of a property (Accuracy).

* Mean is the quotient obtained when the sum of a set of replicate measurements is divided by the number of individuals results in the set.