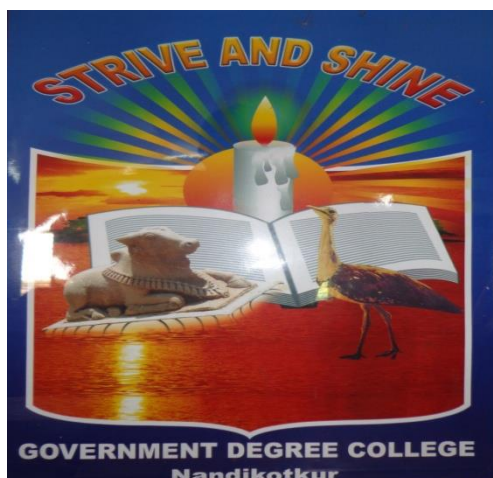


Government Degree College, Nandikotkur



1.1.1: The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

TEACHING SYNOPSIS 2022-23

Academic Year : 2022-23

TEACHING NOTES

December, Academic Year : 2022-23

Paper : I

Subject : Chemistry

Name of the Topic : Solid state

Programme : B.Sc.

Hours Required	06 Hours / week.
Learning Objectives	1. Knowledge
	2. Understanding
	3. Application & Skill.
Previous knowledge to be reminded	Motivated the students towards topic.

Topic Synopsis: Solid state :-Crystal defects:-

All crystals shows some imperfections which are called defects.

Crystal defects are classified into 2 Types.

1. Stoichiometric defects
2. Non-stoichiometric defects.

① Schottky defect:-

It cation is missing from its normal position in an ionic crystal a vacancy is created. To compensate this another vacancy is created. Ex:- NaCl , CsCl .

② Frenkel defects:

This type of defect arises when a cation displaces from its original lattice site to the interstitial position. Ex:- ZnSO_4 & AgBr .

Teaching aids used	Models, charts, Blackboard, PPT.
Additional inputs taught	Law of rationality of indices.
References cited	Unified Chemistry.
Student activity planned after the Teaching	Students prepare notes on current topic

Signature of the lecturer
/Reader

Signature of the lecturer I/C
of the Dept.

Signature of the Principal

Academic Year : 2022-23.

TEACHING NOTES

January,

Paper : I.

Subject : Chemistry

Name of the Topic : Gaseous state

Programme : B.Sc.

Hours Required	06 Hours / week
Learning Objectives	1. Knowledge
	2. Understanding
	3. Application & skill.
Previous knowledge to be reminded	motivated students towards topic.

Topic Synopsis: Law of corresponding states :-

If two or more gases have the same reduced temperature and pressure then their reduced volumes are equal. This is known as L.C. states.

Andrew's Isotherms of CO_2 :- to be explained.

Joule-Thomson effect :-

cooling of gases by expansion from a high pressure to a low pressure is called J.T. effect.

Gases can be cooled by J-T. effect.

The air is cooled compressed to about 200 Atm.

Practicals :- Analysis of Mixture salt.

Teaching aids used	Blackboard. Models. Charts.
Additional inputs taught	Joule-Thomson effect.
References cited	Unified Chemistry.
Student activity planned after the Teaching	Students prepare notes on current topic.

Signature of the lecturer
/Reader

Signature of the lecturer I/C
of the Dept.

Signature of the Principal

Academic year: 2022-23.

TEACHING NOTES

February

Paper : I.
Name of the Topic : SolutionsSubject : Chemistry
Programme : B.Sc.,

Hours Required	06 Hours/ week.
Learning Objectives	1. Knowledge
	2. Understanding
	3. Application & Skill.
Previous knowledge to be reminded	Motivated the students towards topic.

Topic Synopsis: UNIT-V. "SOLUTIONS"

Solution is a homogeneous molecular mixture of two or more substances.

Azeotropes:-

A mixture of two or more liquids which boils at a constant temperature without change in composition is known as Azeotropic solutions.

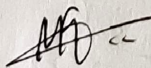
Azeotropic means = constant boiling.

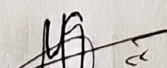
Ex:- $C_2H_5OH + H_2O$.

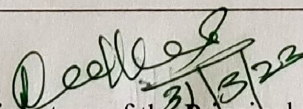
They are 2 types.

1. Maximum Boiling point Azeotropic Mixture.
2. Minimum Boiling point Azeotropic Mixture.
 - (1) M.B.P.A. Mixture - Ex:- $HCl - H_2O$ system.
 - (2) Min. B.P.A. Mixture - Ex:- Ethanol- H_2O system

Teaching aids used	Lab solvents, PPT. models.
Additional inputs taught	Alcoholic solutions.
References cited	Unitied chemistry.
Student activity planned after the Teaching	Students prepare seminar content on relevant topic.


Signature of the lecturer
/Reader


Signature of the lecturer I/C
of the Dept.


Signature of the Principal
3/3/23

Academic Year: 2022-23

TEACHING NOTES

February

Paper : I

Subject : Chemistry

Name of the Topic : Solutions.

Programme : B.Sc.,

Hours Required	06 Hours / week
Learning Objectives	1. Knowledge
	2. Understanding
	3. Application & Skill
Previous knowledge to be reminded	Motivated the students towards topic.

Topic Synopsis:

Nernst Distribution Law :-

A solute distributes itself between two immiscible solvents in contact with each other in such a way that at constant temperature the ratio of its concentrations in the two layers ($\frac{C_1}{C_2}$) is constant irrespective of its total amount

$$\boxed{\frac{C_1}{C_2} = K}$$
Applications of Distribution Law :-

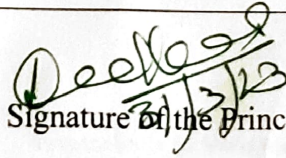
- (1) Determination of molecular complexity.
- (2) Distribution indicators
- (3) Extraction process.

Practicals :- Analysis of Mixture salt.

Teaching aids used	models, charts, Blackboard.
Additional inputs taught	Nernst Distribution Law
References cited	Unified Chemistry text book.
Student activity planned after the Teaching	students prepare notes on current lesson.


Signature of the lecturer
/Reader


Signature of the lecturer I/C
of the Dept.


Signature of the Principal