



<b>Subject</b>	<b>Chemistry</b>
<b>Paper No. and Title</b>	<b>Inorganic Chemistry</b>
<b>Module (Flipped classroom) Title</b>	<b>Acid – Base Concepts</b>
<b>Module Tag</b>	<b>DAYA.CHEM.SVR.M2</b>

By

Mr. Rajmane Shivaji Vishnu

Department of Chemistry

D. B. F. Dayanand College of Arts and Science, Solapur.

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## Module No. 2

### Title: - Superconductors

**Prerequisites:** – Learners should read the concepts of acids and bases from the book.

### Objectives of the Module

#### Sub Unit: 1 – Lewis Concept

	Content	Objectives (Learner should be able to )	Cognitive Level
1.1	Definition	Definition of acid	Remembering
		Definition of base	Remembering
		Examples of Acids and bases	Applying
		Neutralization reaction	Understanding
		Compare Lewis concept with previous acid base concepts	Evaluating
1.2	Classification	Classification acids	Understanding
		Classification of bases	Understanding
		Examples of each class	Applying
		Applications and limitations	Analysing

#### Sub Unit: 2 – HSAB Concept

	Content	Objectives (Learner should be able to )	Cognitive Level
1.1	Definition	Definition of acid	Remembering
		Definition of base	Remembering
		Examples of Acids and bases	Applying
		Pearson's rule	Understanding
		Compare HSAB concept with previous acid base concepts	Evaluating
1.2	Classification	Classification acids	Understanding
		Classification of bases	Understanding
		Borderline acids and Bases	Understanding
		Examples of each class	Applying
		Applications and limitations	Analysing

## Detailed Plan of Out-of -class and In-class activities

Week: 1

Sub Unit: 1 – Lewis Acid Base Concept

### Objectives –

- 1) To know the previous definitions of acids and bases.
- 2) To understand the meaning of Lewis acids and Bases.
- 3) To understand the Classification of Lewis acids and Bases.

### Resources Needed –

Title and Nature of Resources :-

PAH Solapur University B.Sc.-II, Sem.-III, Paper-VI: Inorganic Chemistry Syllabus.

<http://su.digitaluniversity.ac/WebFiles/BOS%20B%20Sc%20II%20Chemistry.pdf>

### Material :

A) Books -

i) Text Book: B.Sc.-II (Sem.-III) Paper-VI: Inorganic Chemistry.

ii) Reference Book: Principles of Inorganic Chemistry by B. K. Sharma

B) Instructor made -

i) PPT -

[https://docs.google.com/presentation/d/1Z\\_mivjnDIGHJ4P9FikME4enK42FaYcBF/edit#slide=id.p1](https://docs.google.com/presentation/d/1Z_mivjnDIGHJ4P9FikME4enK42FaYcBF/edit#slide=id.p1)

ii) Video – <https://youtu.be/nWETBSZl7bM>

iii) Soft study material - <https://drive.google.com/drive/u/0/recent>

C) Assessment- <https://drive.google.com/drive/u/0/recent>

Units	Out-of –class activity Details of Activity	In-class activity Details of Activity	Assessment
1.1	Students should read out the topic from Text and Reference book  Students should listen the recordings	Discussion on the topic Check the level of understanding through Question – answer session	Question – answer session
1.2	Students should read out the topic from Text and Reference book  Students should listen the recordings	Same as above  Help students to apply the definition	Question to write in detail

Week: 2

Sub Unit: 2 – Hard Soft Acids and Bases (HSAB) Concept

**Objectives –**

- 1) To know types of elements as class a & b.
- 2) To understand electronic concept of acids and bases.
- 3) To know Pearson's rule.
- 4) To understand the hardness and softness.
- 5) To understand the classification of acids and bases.
- 6) To understand applications of concept.

**Resources Needed –**

Title and Nature of Resources :-

PAH Solapur University B.Sc.-II, Sem.-III, Paper-VI: Inorganic Chemistry Syllabus.

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**Material :**

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i) PPT - : [https://docs.google.com/presentation/d/1-Z83\\_2cvOlufFEyHHGypJc\\_ZP6O9SVP-/edit#slide=id.p1](https://docs.google.com/presentation/d/1-Z83_2cvOlufFEyHHGypJc_ZP6O9SVP-/edit#slide=id.p1)

ii) Video – <https://youtu.be/YHNdigu0EEM>

iii) Soft study material - <https://drive.google.com/drive/u/0/recent>

C) Assessment- <https://drive.google.com/drive/u/0/recent>

<b>Units</b>	<b>Out-of –class activity Details of Activity</b>	<b>In-class activity Details of Activity</b>	<b>Assessment</b>
2.1	Students should read out the topic from Text and reference book  Students should listen the recordings	Discussion on the topic Check the level of understanding through Question – answer session	Question – answer session
2.2	Students should read out the topic from Text and reference book  Students should listen the recordings	Same as above  Help students to develop the information in tabular form	Question to write in detail