



JNAN VIKAS MANDAL'S  
Amratlal Raichand Mehta Degree College of Arts  
Diwali Maa Degree College of Science  
Mohanlal Raichand Mehta College of Commerce  
Padmashree (Dr.) R.T. Doshi Degree College of Computer Science  
Plot no.9, Sector -19, Airoli Navi Mumbai

Date: 26.04.2022

**NOTICE**

All faculties of the Science Department are hereby informed that tomorrow on 27.04.2022 there will be meeting at 1 p.m. in Principal's room.

All the members are requested to be present for the same.

**AGENDA**

- 1] To discuss about conducting "Bridge Course" for the academic year.
- 2] Any other matter with the permission of Chairperson.



*Neena*  
Dr. Leena Sarkar

(Principal & Chairperson)

**PRINCIPAL**  
JNAN VIKAS MANDAL'S  
M.R. MEHTA COLLEGE OF COMMERCE  
D.M. COLLEGE OF SCIENCE  
A.R. MEHTA COLLEGE OF ARTS  
Dr. R.T. DOSHI COLLEGE OF COMPUTER SCIENCE  
Plot No.9, SEC. - 19, AIROLI,  
NAVI MUMBAI-400 708



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Date: 27.04.2022

**Minutes of the Meeting**

Meeting was held with the faculties of Science Department on 27.04.2022 at 1.00 p.m chaired by Principal Dr. Leena Sarkar

**Following points were discussed in the meeting :-**

- 1] Principal Dr. Leena Sarkar madam advised that faculties from all department of science should conduct "Bridge Course" for S.Y. and T.Y. B.Sc. class with an objective to make students familiar with the concepts related to the syllabus to be dealt in the coming year
- 2] In this meeting, time table and syllabus for Bridge Course was finalized.
- 3] Meeting was end with vote of thanks.

**Following members were present in the meeting: -**

1. Dr. Leena Sarkar [ Principal] *Leena Sarkar*
2. Asst. Prof. Sandhya Patil *Sandhya Patil*
3. Asst. Prof. Harshada Niju *Harshada Niju*
4. Dr. Prajakta Kadu *Prajakta Kadu*
5. Dr. Prajakta Kadu *Prajakta Kadu*
6. Asst. Prof. Savita Kumari *Savita Kumari*
7. Dr. Shweta Rathore *Shweta Rathore*
8. Asst. Prof. Sagar Shinde *Sagar Shinde*
9. Asst. Prof. Nishant Bist *Nishant Bist*
10. Asst. Prof. Pintoo Jiaswar *Pintoo Jiaswar*

*Sandhya Patil*  
Asst. Prof. Sandhya Patil  
Science Incharge



*Leena Sarkar*  
Dr. Leena Sarkar  
Principal & Chairperson)

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**JNAN VIKAS MANDAL'S (Linguistic Minority)**

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DiwaliMaa College of Science

Amritlal Raichand Mehta College of Arts

Dr. R.T. Doshi College of Computer Science

Plot No.9, Sector -19, Airoli, Navi Mumbai 400708

<b>Program</b>	<b>B.Sc.</b>
<b>Year</b>	<b>2022-23</b>
<b>Eligibility Class</b>	<b>T.Y.B.Sc. (Chemistry)</b>
<b>Course</b>	<b>Offline Bridge course in Science</b>
<b>Number of Lectures</b>	<b>30</b>
<b>Objectives of the Course</b>	
<ul style="list-style-type: none"><li>• To create strong problem solving skills as a science student along with an understanding of the approach, methods of preparation and analysis in Chemistry for a successful career in advancing technology. Its science and design components prepare students to work as professional in Chemistry subject</li><li>• To build concrete foundation for their core branch as a thinker, inter disciplinary thoughts and socio- technical issues in field.</li><li>• To create advance applied knowledge of Chemistry as a subject of the foundation of Science.</li><li>• A breather, to prepare themselves before courses commence.</li></ul>	
<b>Course Outcome</b>	
<ul style="list-style-type: none"><li>• Student will be able to apply knowledge of basic theories of Chemistry in core subject of Science.</li><li>• Student will be able to create an experimental approach in applied theories of science in problem solving technical problems.</li><li>• Student will be able to associate natural phenomenon with technological advancement.</li><li>• It has helped students for enhancing critical thinking skills through self-exploration and class experiences.</li></ul>	





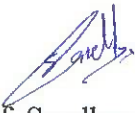
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**SCIENCE DEPARTMENT**  
**BRIDGE COURSE SYLLABUS (2022-2023)**


**LEVEL-III (13<sup>th</sup> June-18<sup>th</sup> June 2022)**

The Bridge Course for T.Y. B.Sc. (Chemistry) was divided into 4 modules. Following Faculty members have undertaken the course:

- Asst. Prof. Harshada Niju: H.N.
- Asst. Prof. Sandhya Patil : S.P
- Asst. Prof. Shweta Rathore: S.R.
- Asst. Prof. Savita Kumari: S.K.

  
Asst. Prof. Sandhya Patil  
Science Incharge



  
Dr. Leena Sarkar  
Principal & Chairperson)

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### SCIENCE DEPARTMENT

### BRIDGE COURSE CONTENT- 2022-23

LEVEL-III (For T.Y.B.Sc. Chemistry) 13- -18- June 2022

	MODULE-1	7Hrs.
1.1.	Molecular Spectroscopy: Terms involved, Beer-Lamberts law, spectrum of radiations. Types of spectra: rotational, vibrational, rotational-vibrational	H.N.
1.2.	Chemical Thermodynamics: Basic concepts and terms involved. Chemical Kinetics: Terms, rate of reaction, rate constant, order of the reaction	H.N.
1.3.	Nuclear Chemistry: Types of radiation, radioactive elements, law of disintegration	H.N.
1.4	Surfactant chemistry: absorption & adsorption differences, types of adsorption Colloidal state: Particle size, true solution, suspensions, colloidal with examples	H.N.
1.5	Concept of concentration	H.N.
1.6	Surface Chemistry	H.N.



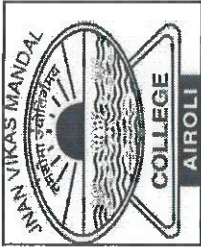
1.7	Assignment	H.N
	<b>MODULE-2</b>	<b>8Hrs</b>
2.1	<b>Molecular Orbital Theory of homo nuclear diatomic molecules 3L</b>	S.R.
2.2	Hybridisation 1L	S.R.
2.3	Calculation of oxidation state 1L	S.R.
2.4	Basic terminologies used in drug chemistry 1 L	S.R.
2.5	Assignment Inorganic Chemistry	S.R.
2.6	Assignment Dyes	S.R.
	<b>MODULE-3</b>	<b>8Hrs.</b>
3.1.	Concepts of writing organic reaction mechanism, use of curved arrows	S.K
3.2.	Reaction Mechanism: Types of reactions, Electronic effects, Directing effects, types of reagents	S.K
3.3	Basic terminologies in stereochemistry	S.K
3.4	IUPAC Nomenclature for organic compounds	S.K
3.5	Concept of Green Chemistry	S.K
3.6	Historical development in dyes	S.K
3.7	Assignment Organic Chemistry	S.K
3.8	Assignment Dyes	S.K



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	<b>MODULE-4</b>	<b>7Hrs.</b>
4.1	Sampling: Purpose, difficulties encountered	S.P
4.2	Methods of sampling: solids, liquids and gases	S.P
4.3	Solvent Extraction: Principle, batch and continuous extraction	S.P
4.4	Separation methods: chromatography	S.P
4.5	Chemical Calculation: molality, normality	S.P.
4.6	Chemical Calculation: molarity, Percent composition	S.P.
4.7	Assignment Analytical Chemistry	S.P





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## Bridge Course-Timetable 13<sup>th</sup> -19<sup>th</sup> June 2022

Class - T.Y.B.Sc.

Academic year: 2022-23

Time	Day						
Day	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
9.00 to 10.00 am	(S.R.)	(S.P)	(S.P.)	(S.K)	(H.N.)	(S.P.)	
10.10 to 11.00 am	(S.K)	(S.P)	(S.R.)	(S.P.)	(S.R.)	(H.N.)	
11.20 to 12.20 pm	(S.P.)	(S.K)	(H.N.)	(H.N.)	(S.K)	(S.R.)	
12.30 to 1.20 pm	(H.N.)	(S.R.)	(S.K)	(S.R.)	(H.N.)	(S.K.)	

H.N – Mrs. Harshada Niju S.P – Mrs. Sandhya Patil S.K – Miss Savita Kumari S.R – Dr. Shweta Rathore

Sign of Class teacher -

*Neena*

Sign of H.O.D.-

*Neena*

Sign of Principal-



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**BRIDGE COURSE (2022-23)**  
**T.Y. B.Sc. (Chemistry)**

**ASSESSMENT RECORD**

Name of Student	Physical Chemistry	Inorganic Chemistry	Organic Chemistry	Analytical Chemistry	Total out of 40
Tanaya Aher	8	9	9	8	34
Anurag	9	9	9	8	35
Renuka	7	6	5	4	22
Aditi Chourasia	8	9	9	9	35
Sanjana Ghare	7	8	8	7	30
Kavita Gond	6	5	6	5	22
Anjali	7	7	8	7	29
Ashish Jagdale	7	6	5	4	22
Ritesh	4	5	4	5	18
Pallavi Mane	7	7	8	7	29
Abhinaya Nadar	8	8	8	9	33
Soham	6	5	5	5	21
Sai Panchal	7	8	6	7	28
Santosh	8	7	8	7	30
Pooja	6	7	6	7	26
Snehal	7	7	7	6	27
Saurabh	7	6	7	6	26
Muskan F	5	5	4	4	18
Sandeep	7	7	6	7	27
Vishal	5	6	5	5	21
Shweta	6	7	7	7	27

