# Janata Shikshan Sanstha's Kisan Veer Mahavidyalaya, Wai (Satara) Department of Chemistry M.Sc. I and II Study Tour 2023-24

### REPORT

Date: 28th February 2024

Places Visited: Wai -Swami Narayan Temple - IISER- C-MET- -Savitribai Phule Pune University-Balaji-DattaTemple (Narayanpur)-Wai.

**Aim of Tour**: The main aim of our study tour was to visit national level science and knowledge-based research organizations like IISER and C-MET and to collect informative knowledge about recent trends in research, introduce the students with instruments used at research level and industry level. Also to visit nearby temples.

Visit to Swami Narayan Temple: The students first visited the Swami Narayan temple which comes at the beginning of the Journey.

Visit to IISER: The students then visited the IISER, there was National Science Day celebration. students saw the projects brought to the science fair.

Visit to C-MET: The students next visited C-MET, instrumental operator show demo of industrial instruments like XRD, FDM,FT-IR, HPLC, SEM, GC, UV-VIS Spectrophotometer and explained application of plasma laboratories.

XRD -In materials research, the scientist has many analytical questions related to the chemical composition and crystalline constitution of materials. X-ray diffraction (XRD) is the only laboratory technique that non-destructively and accurately obtains information about chemical composition, crystal structure, crystal orientation, crystallite size, lattice strain, preferred orientation and layer thickness. Materials researchers therefore use XRD to analyze a wide range of materials, from powders to solids, thin films and nanomaterials.

<u>FDM</u>—Fused Deposition Modeling (FDM) systems and related technologies are the most accessible and widely used form of 3D printing. FDM machines build parts layer-by-layer from the bottom up by heating and extruding thermoplastic filament. The production-grade thermoplastic material used is suitable for detailed functional prototypes, durable manufacturing tools & low-volume manufacturing parts.

<u>FT-IR</u> –Fourier Transform Infrared Spectroscopy, also known as FTIR Analysis or FTIR Spectroscopy, is an analytical technique used to identify organic, polymeric, and, in some cases, inorganic materials. The FTIR analysis method uses infrared light to scan test samples and observe chemical properties.

HPLC -High-performance liquid chromatography (HPLC), formerly referred to as high-pressure liquid chromatography, is a technique in analytical chemistry used to separate, identify, and quantify specific

components in mixtures. The mixtures can originate from food, chemicals, pharmaceuticals which have been dissolved into liquid solutions.

<u>SEM – A scanning electron microscope</u> is a type of electron microscope that produces images of a sample by scanning the surface with a focused beam of electrons. The electrons interact with atoms in the sample, producing various signals that contain information about the surface topography and composition of the sample. The electron beam is scanned in a raster scan pattern, and the position of the beam is combined with the intensity of the detected signal to produce an image.

<u>GC —Gas chromatography</u> is the process of separating compounds in a mixture by injecting a gaseous or liquid sample into a mobile phase, typically called the carrier gas, and passing the gas through a stationary phase. The mobile phase is usually an inert gas or an unreactive gas such as helium, argon, nitrogen or hydrogen. The stationary phase can be solid or liquid.

<u>UV- VIS Spectrophotometer</u> –A UV-VIS spectrophotometer is an analytical instrument that measures the amount of ultraviolet (UV) and visible light that is absorbed by a sample. It is a widely used technique in chemistry, biochemistry, and other fields, to identify and quantify compounds in a variety of samples.

Visit to Pune University: The students visited chemistry laboraties in the Savitribai Phule University. They interacted with university students. The teachers briefed our students about the instruments they used common facility centre (Research Centre) like UV-VIS spectrometer, UV chamber, GCMS, LCMC, NMR spectrometer, SEM.

Visit to Balaji Temple and Shree Datta Temple: While returning home, students visited the Balaji temple and Shree Datta temple in Narayanpur.

Overall the Study Tour was successful and will be beneficial to our students of M.Sc. I and M.Sc. II. Total 25 students in which 08 males and 17 females along with 5 staff members had participated in the study tour.



Head

Department of Chemistry

Department of Chemistry

Kisan Veer Mahavidyalaya, Wai

Date: 26/02/2024

## NOTICE

All the students of M.Sc. II are here by informed that a study tour at IICER – C-MET – Savitribai Phule University is organized by department of chemistry on Wednesday 28/02/2024 at 7:00 am. So all students should remain present for the same.

Head

Department of Chemistry



Department of Chemistry Kisan Veer Mahavidyalaya, Wai Date: 26/02/2024

To, The Principal Kisan Veer Mahavidyalaya, Wai.

Respected Sir,

The department of chemistry going to organise visit to NCL, IISER and C-MET on Wednesday, 28<sup>th</sup> February 2024. Total 5 faculty and 25 students are participating for the same. Please grant the permission for the same.

The names of the students and faculty are as follows:

### STUDENT NAME

- 1. BHOSALE TRUPTI KRISHNAT
- 2. PISAL SNEHAL RAJENDRA
- 3. SHINDE KAJAL RAJENDRA
- 4. BHOSALE PRATIKSHA PRADIP
- 5. TARATE VAISHNAVI ANIL
- 6. KHANDE SIDDHI SANJAY
- 7. PISAL KETAN KISHOR
- 8. SHELAR SWAPNALI SUBHASH
- 9. CHAVAN GANESH JAYWANT
- 10. SALUNKHE ASHUTOSH SATISH
- 11. GHADAGE YASHASHRI PRAMOD
- 12. MULIK GANESH KIRAN
- 13. RAJE SHUBHAM RAJENDRA
- 14. KACHARE RAHUL SUBHASH
- 15. SURYAWANSHI PRIYANKA CHINCHOLPPA
- 16. VAIRAT PRIYANKA ANANDA
- 17. JAMDADE SNEHAL SANJAY
- 18. BAGAL AISHWARYA SOMESHWAR
- 19. KAMBLE MAYURI MEGHNATH
- 20. DABHADE SHARVARI MILIND
- 21. THORAVE PRIYANKA DINESH
- 22. SHINDE SAURABH MOHAN
- 23. PISAL SUSHMA AJIT
- 24. KOCHALE PRITI DAGADU
- 25. JAGTAP PRAJAKTA PRAVIN

### **FACULTY NAME**

- 1. PROF. (DR.) D. N. ZAMBARE
- 2. MRS. D. S. PATIL
- 3. MR. A. A. DHANAWADE
- 4. MISS. R. R. KAMBLE
- 5. MISS. N. S. SURVE

WAI Dist. Satara

Head Department of Chemistry

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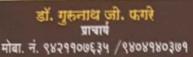
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ता. वाई, जि. सातारा, महाराष्ट्र पिन - ४१२ ८०३ शिवाजी विद्यापीठ, कोल्हापूर संलग्नीत NAAC Accredited: B\* (CGPA 2.66) Website: www.kvmwai.edu.in

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UDISE No.: 27311111516 Index No.: J21.11.001

किसन महादेव वीर संस्थापक-अध्यक्ष ता शिक्षण संस्था, वाई



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थ्री. मदन प्रतापराव भीसले जनता शिक्षण संस्था, वाई

दिनांक ; 7 5 FEB 2024

To. The Director, HSER, Pune.

Sub: - Regarding Permission for Educational Visit on 28th February 2024

Respected Sir,

As we know, IISER, Pune promotes the scientific research. Its research has been recognized globally through international accolades. It consistently ranks high in national and international educational and research rankings. As a unique initiative in science education in India, IISER aims to be a Science University of the highest caliber devoted to both teaching and research in a totally integrated manner, with state-of-the-art research and high quality education, thus nurturing both curiosity and creativity.

To get such research exposure, our M.Sc. Organic Chemistry Part II students are interested in visiting to your esteemed organization. Please grant the permission for our educational visit on Science Day, 28th February 2024. Student count: 30, Faculty: 04

Yours faithfully,

Vantant

Enclosure: Student list



जनता शिक्षण संस्थेचे

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श्री. मदन प्रतापराव भोसले अध्यक्ष जनता शिक्षण संस्था, वाई

संदर्भ क्र. :

The Director General, C-MET, Pune.

Sub: - Regarding Permission for Educational Visit on 28th February 2024

Respected Sir,

C-MET carries research and development on electronic materials and their processing keeping in view the development in the electronic and IT industry all over the world. C-MET undertakes R&D projects, sponsored research, technology transfer, and consultancy and technical services.

To get such research exposure, our M.Sc. Organic Chemistry Part II students are interested in visiting to your esteemed organization. Please grant the permission for our educational visit on Science Day, 28th February 2024.

Student count: 30, Faculty: 04

Yours faithfully,

Principal

Enclosure: Student list

## JANATA SHIKSHAN SANSTHA'S KISAN VEER MAHAVIDYALAYA, WAI DEPARTMENT OF CHEMISTRY STUDY TOUR ( NCL, IISER, C-MET) M.Sc. I & II

Attendance

		Attendance	D.1 21	9.02.2024
	D 1131	Name of David		8.02.2024 Signature
	Roll No.			
1	27	Jaghap Prajakto Pravio	t.	Polyho
2	18	Pisal Sushma Ajit	F	S.A.Pisa
3	28	Khande Siddhi Sanjay	F	Brancle
4	27	Pisal Snehal Rajendra	F	Fish
5	25	Tarate Vaishnavi Anil	F	Variete
6	26	Tamdade Spehal Sanjay	F	Samede
7	31	Surywanshi Priyanka C	F	Pos.
8	33	Shelae Swaprali S	F	Strelee
9	07	Bhosale pratiksha pradip	-	Palaks
10	02	Dabhade Shanuan Mi	F	Anyushad
11	05	Bagal Aishwagyas-	F	Astregal
12	04	Kamble Mayun M.	F	Mester
13	06	Bhosave Trapti K	F	Bhooale
14	08	Vajeat påyanke P	F	Proisas
15	03	Chavan Ganesh J.	W	Garech
16	23	Ghinde Kajal R	F	K.P. Shin
17	24	Ghadge raptorther P	t.	Poloto
18	12	Solunkhe Ashcutosh s.	507.	Asing
19	13	Roje Shubham P.	m.	S.R. Rap
20	14	mulik Genesh K.	Pr.	OKIMPLE.
21	28	shinde sough m.	m	- Jakoko
22	18	Pisal Ketant.	10.	Dise
23	70		P	Knoth.
24	17	Wagh Agamya 3. Kachare Ratul S	m.	a Kadel
25	11	Kochale Priti	1=	Rodel
26		17.7		
27		Male - 08		
28		Female - 17		
29		Eggs 1 day - DE		
23		Faculty - 05		



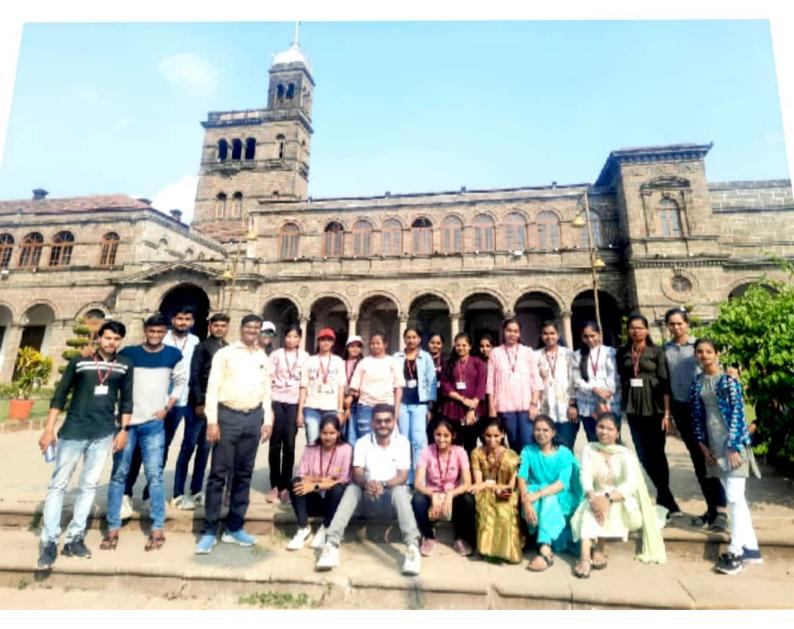












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