



Sevadal Education Society's

Sevadal Mahila Mahavidyalaya

NAAC RE-REACCREDITED WITH 'A' GRADE

Sakkardara Square, Umrer Road, Nagpur - 440 024 (M.S.)

Phone No.: 0712-2705037, 2751344 Fax: 0712-2705037

E-mail: sevamahilamv@gmail.com; smm_college@yahoo.co.in

Website: <https://sevadmahilamahavidyalaya.ac.in>

CERTIFICATE COURSE

“Synthesis and Characterization of Inorganic Phosphors”

(Duration - Three Months)

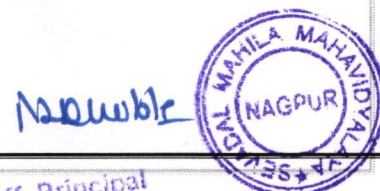
Course Co-ordinators

Prof. (Mrs.) N. S. Dhoble

Dr. (Mrs.) A. M. Duragkar

Department of Chemistry,
Sevadal Mahila Mahavidyalaya,
Nagpur

2023 – 2024



Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Course Title : Synthesis and Characterization of Inorganic Phosphors

Brief Description of the Course and Objectives:

Undergraduate Department of Chemistry of Sevadal Mahila Mahavidyalaya, Nagpur offers 60 hrs. Certificate course on "Synthesis and Characterization of Inorganic Phosphors". It is well known the primary energy resources are fast depleting. India needs to rely on the resources like solar energy, wind energy, geothermal energy, nuclear energy, solid state lighting, hydropower energy. These primary sources are converted into electricity, a secondary energy source. Solar energy, nuclear energy has their own limitations however, solid state lighting offers comparatively cheap and efficient light source. LED bulbs are the most efficient light bulbs available now. An LED bulb light can last 30-50% longer than normal bulbs and low cost makes it an ideal way to save energy and money on lighting in long term. LED bulb consists of a thin film of phosphor in the form of LED chip along with other circuit.

In this certificate course, synthesis of phosphor material using various techniques will be carried out. The prepared material will be characterized by XRD, FTIR, Photoluminescence Studies. Analysis of the material would be carried out for its suitability as a LED phosphor material.


Objectives:

The course aimed at imparting skills on advanced field of solid state lighting, giving competitive advantage over others validation of knowledge, increased confidence, enhanced credibility, imparts skill in synthesis strategies. Innovative characterization techniques of materials and chemical system enhancing and enriching the students learning experience in the college and to bring about a more holistic approach to learning as well as to cultivate and develop necessary skills for various careers.

Course Outline:

- 01. Module I :** Selection of material and selection of activator
- 02. Module II :** Preparation of materials by various methods
- 03. Module III :** Characterization of material by XRD, Photoluminescence studies of synthesized material
- 04. Module IV:** Analysis and applicability of the material for solid state lighting

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Syllabus :

Idea about phosphor, luminescence, Fluorescence, Phosphorescence, Types of luminescence, Photoluminescence, application of luminescence, Luminescence phenomenon in phosphors, Excitation and emission, Rare earth ions, lanthanides, Important transitions, White LED, inorganic phosphors, Different methods of preparation of phosphors, Characterization techniques, Synthesis of some phosphors and their characterization studies

Teaching Methodology:

1. Chalk and board method
2. Power point presentation
3. Demonstration of synthesis methods for known phosphor material
4. Balance operation
5. Introduction and explanation of various instruments for synthesis and characterization of phosphors
6. Field/ research lab visits
7. Analysis of the prepared materials

Guest Lectures:**Invited Speakers**

1. **Mrs. Manjusha Taiwade**
Assistant Professor, Kamla Nehru Mahavidyalaya, Nagpur
2. **Mrs. Nilima Sarode**
Lecturer, Vidarbha Buniyadi Junior College, Nagpur
3. **Mrs. Shital Awaghade**
Associate Professor, Vidya Vikas College, Samudrapur

Assessment of Students :

Assessment of students will be done through theoretical assignments/seminars.

Duration : Three months

Total Hrs: 60 Hrs.

- Theoretical/ Hands on training - 50 hrs.
- Research place visit - 5 hrs.
- Assignment and Seminars - 5 hrs.

Time : Theory Classes 11.30 am. to 12.30 pm. on Thursday, Friday and Saturday
Practicals: 3.00 pm to 4.30 pm on Monday and Tuesday

After completion of the course successful candidates will be awarded certificates.

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Learning Outcomes:

1. Provides knowledge on recent important subject, importance of energy generation and conservation
2. Allows students to learn about the scientific practical methods and imbibe skills in deductive reasoning, problem solving and communication.
3. For imparting skills hence job opportunities
4. Provides platform for carrying research, understanding, research papers, references, leading to Ph.D. in materials science, chemistry.



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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Date : 04.12.2023

NOTICE

All the members of the Department of Chemistry are hereby informed that the meeting regarding the Certificate Course in Chemistry has been scheduled on 11th Dec. 2023 at 11.30am at the Hon'ble Principal's Chamber.

Hon'ble Principal Sir will chair the meeting in presence of Dr. A.P. Lambat, NAAC Coordinator.

Agenda of the Meeting:

1. To commence three Certificate Courses in Chemistry Department for UG and PG students.
2. To frame the syllabus of the course.
3. Any other matter with the permission of the chair.

Ms. A.S. Mahakalkar
Prof. A. S. Mahakalkar
Head,
Department of Chemistry
Sevadal Mahila Mahavidyalaya,
Nagpur

Copy to:
Dr. A. P. Lambat, NAAC Coordinator

K.P. Lambat
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Minutes of the Meeting dated on 11.12.2023 Certificate Courses in Department of Chemistry

The meeting regarding the Certificate Courses run by Department of Chemistry was held on 11th Dec. 2023 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

1. To commence three Certificate Courses in Chemistry Department for UG and PG students.
2. To frame the syllabus of the course.
3. Any other matter with the permission of the chair.

Following Members were present.


- | | |
|-----------------------------------|-------------------------------|
| 1) Prof. Pravin Charde, Principal | Chairman |
| 2) Dr. A. P. Lambat | IQAC Coordinator |
| 3) Prof. A. S. Mahakalkar | Head, Department of Chemistry |
| 4) Prof. N. S. Dhoble | Member |
| 5) Prof. M. P. Patil | Member |
| 6) Dr. Mrs. P. P. Chahande | Member |
| 7) Dr. Mrs. A. M. Duragkar | Member |
| 8) Dr. Mrs. P. P. Morey | Member |

Prof. A.S. Mahakalkar, Head, Department of Chemistry acted as secretary in the meeting. Head of Department welcomed the Chairperson, Hon'ble Principal, other members and called the meeting in order with permission of chairperson, read out agenda of the meeting and subsequently discussed the matter.

Item No. 1: To commence three certificate courses in Chemistry Department.

Resolution : Unanimously it was decided to commence the Certificate Course in Department of Chemistry from the session 2023-24 with course name and coordinators as follows-

N. S. Dhoble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.







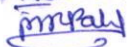
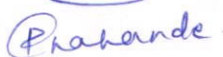


- A) "Synthesis and Characterization of Inorganic Phosphors"
Coordinator: Prof Mrs. N. S. Dhoble **Member:** Dr. (Mrs.) A. M. Duragkar
- B) "Preparation of Liquid Soap and Detergent Powder".
Coordinator: Prof. Mrs. M. P. Patil **Member:** Dr. (Mrs.) P. P. Chahande
- C) "Biodegradation of Kitchen Waste"
Coordinator: Prof. (Mrs.) A. S. Mahakalkar **Member:** Dr. (Mrs.) P. P. Morey

Item No. 2: To frame the syllabus of the course.

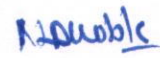
Resolution: Hon'ble Principal expressed his views regarding the framing of course syllabus. Coordinators and members were asked to prepare syllabus of the respective Certificate Courses.

Item No. 3: Any other matter with the permission of Chair.

Resolution: As there was no other matter to discuss, the head of department of Chemistry sum up the meeting by expressing thanks for everyone's gracious attendance.

Name	Signature
1. Prof. Pravin Charde, Principal	
2. Dr. A. P. Lambat	
3. Prof. Mrs. A. S. Mahakalkar	 Mrs. A. S. Mahakalkar
4. Prof. Mrs. N. S. Dhoble	 Mrs. N. S. Dhoble
5. Prof. M. P. Patil	 M. P. Patil
6. Dr. Mrs. P. P. Chahande	 P. P. Chahande
7. Dr. Mrs. A. M. Duragkar	 A. M. Duragkar
8. Dr. Mrs. P. P. Morey	 P. P. Morey




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Date- 15.12.2023

NOTICE

All the UG students of science faculty are hereby informed that college has started various certificate courses. One of them is certificate course in "Synthesis & characterization of Inorganic Phosphors" run by Department of Chemistry.

Interested students should contact following teachers for admission on or before 30th December 2023.

- 1) Prof. Mrs. N. S. Dhoble
- 2) Dr. Mrs. A. M. Duragkar



Prof. Pravin Charde
Principal
Sevadal Mahila Mahavidyalaya,
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N. Dhoble

Off. Principal
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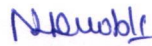
Sakkardara Square, Umrer Road, Nagpur-440024

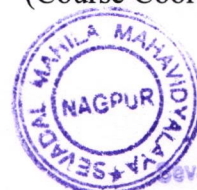
List of Students Enrolled for "Synthesis & Characterization of Inorganic Phosphors"

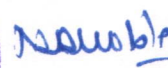
Certificate Course in Department of Chemistry

S.N.	Name of Student	Class
1	Ms. Alfiya Naaz	B.Sc Sem VI (Biotech Batch)
2	Ms. Anam Aslam Khan	B.Sc. Sem VI
3	Ms. Ashlesha Chimantrawar	B.Sc. Sem VI
4	Ms. Ashlesha Jamaiwar	B.Sc. Sem VI
5	Ms. Bobby R. Yawalkar	B.Sc. Sem VI
6	Ms. Chitra Kaikade	B.Sc. Sem VI
7	Ms. Divya Patle	B.Sc. Sem VI
8	Ms. Janvi Awsare	B.Sc. Sem VI
9	Ms. Kalyani Lende	B.Sc. Sem VI
10	Ms. Komal Shatrakar	B.Sc. Sem VI
11	Ms. Krutika Vaidya	B.Sc. Sem VI
12	Ms. Maliha Parveen Sheikh	B.Sc. Sem VI
13	Ms. Manisha Farkade	B.Sc. Sem VI
14	Ms. Manjiri Bante	B.Sc. Sem VI
15	Ms. Mansi Kanpillewar	B.Sc. Sem VI
16	Ms. Megha Pise	B.Sc. Sem VI
17	Ms. Naba Ismail Sheikh	B.Sc. Sem VI
18	Ms. Payal Nakade	B.Sc. Sem VI
19	Ms. Prajakta S. Yende	B.Sc. Sem VI
20	Ms. Pranali Wathore	B.Sc. Sem VI
21	Ms. Pranali Kelwade	B.Sc. Sem VI
22	Ms. Priya Wanaskar	B.Sc. Sem VI
23	Ms. Priyanka Ubale	B.Sc. Sem VI
24	Ms. Sakshi Thawkar	B.Sc. Sem VI
25	Ms. Sakshi Dahane	B.Sc. Sem VI
26	Ms. Shristi Mahajan	B.Sc. Sem VI
27	Ms. Shristi Deshkar	B.Sc. Sem VI
28	Ms. Samruddhi Akhud	B.Sc. Sem VI
29	Ms. Tanvi Bhongade	B.Sc. Sem VI
30	Ms. Vaishnavi Umak	B.Sc. Sem VI
31	Ms. Anamika Chate	B.Sc. Sem VI (CMB batch)
32	Ms. Sidhhi Hulke	B.Sc. Sem VI
33	Ms. Sushma Urkude	B.Sc. Sem VI
34	Ms. Varsha Tonpe	B.Sc. Sem VI
35	Ms. Chetana Jangade	B.Sc. Sem VI


Dr. Mrs. A.M. Duragkar
(Member)


Prof. Mrs. N.S. Dhoble
(Course Coordinator)





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Nagpur.



SEVADAL SHIKSHAN SANSTHA'S
NAAC REACCREDITED B+ GRADE
SEVADAL MAHILA MAHAVIDYALAYA
& RESEARCH ACADEMY

Sakkardara Square, Umreer Road, Nagpur-24

Session (2021-22)

Attendance for the

Month of

Total
Lectures/
Practical
engaged

Roll No.	NAME MB/BI Batch																									Total No of Lectures/ Practical attended		
		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25					
01	Aaliya Naaz	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
02	Aam Aalam Khan	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
03	Ashlesha Chimentrawar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
04	Ashlesha Jambwar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
05	Bobby R. Yawalkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
06	Chitra Kulkade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
07	Divya Patle	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
08	Kaushika Jagtap	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
09	Jayanti A. Awarde	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Kalyani Lende	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	Komal Shastrakar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	Krutika Vaidya	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	Mahila Parveen Sheikh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	Manisha Farukde	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	Manjiri S. Bante	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	Mansi Kanphulewar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	Megha A. Pise	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	Naba Jemali Sheikh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	Payal S. Nikade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	Prajakta S. Yende	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	Pranali P. Wathore	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	Pranali Kelwade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23	Prisha N. Wannakar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
24	Priyanka Ubale	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	Sakshi D. Thewhal	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	Sakshi Bahanc	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	Sakshi Mahajan	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	Shristi S. Dandekar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	Samruddhi Ashud	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	Tanvi S. Bhargade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	Vaishnavi G. Umak	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	Anamika Chale	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Total Theory
class 24
hours =
24 x 50 min
= 1200 min
= 20 hrs



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Sevalal Mahila Mahavidyalaya
Nagpur.



SEVIDAL SHIKSHAN SANSTHA
NAAC PROB
**SEVIDAL MAHILA MA
& RESEARCH ACADEMY**
Sankardara Square, Urwer Ho

"Practical"

Attendance for the Month of

Total
Lectures
Practical
engaged

Roll No	NAME	Attendance for the																															Total No. of Lectures Practical attended
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
01	Alliya Naz	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
02	Anam Aslam Khan	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
03	Ashlesha Chimentrawar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
04	Ashlesha Jansariwar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
05	Bobby R. Yawankar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
06	Chitra Kalkade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
07	Divya Patle	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
08	Indirisha Waghmare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
09	Janvi A. Awzare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Kalyani Lende	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	Komal Shastrikar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	Krutika Vaidya	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	Melina Parveen Sheikh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	Manisha Fertkade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	Manjiri T. Bante	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	Mani Kasipillawar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	Megha A. Puro	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	Naba Jaimat Sheikh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	Payal S. Nerkade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	Prajakta S. Yende	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	Pranali P. Wadhore	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	Pranali Kalwade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23	Prisha H. Wannekar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
24	Priyanka Ubale	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	Sakshi D. Thawhal	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	Sakshi Bahane	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	Sakshi Mahajan	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	Shruti S. Dabhkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	Samruddhi Akhud	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	Tanvi S. Bhargade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	Vaishnavi G. Umak	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	Anamika Chule	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
																																	Total Practical Taken = 26 x 50 mins = 1300 mins = 30 hrs



Nowble
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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Date : 01.04.2024

NOTICE

All the members of the Department of Chemistry are hereby informed that the meeting regarding the Certificate Course in Chemistry has been scheduled on 5th April 2024 at 11.30 am at the Hon'ble Principal's Chamber.

Hon'ble Principal madam will chair the meeting in presence of A.P. Lambat, NAAC Coordinator.

Agenda of the meeting:

1. To confirm the minutes of the last meeting.
2. To review the completion of certificate course syllabus and to decide examination schedule of the course.
3. Any other matter with the permission of the chair.

Ms. A. S. Mahakalkar

Prof. A. S. Mahakalkar
Head,
Department of Chemistry
Sevadal Mahila Mahavidyalaya,
Nagpur

Copy to:

Dr. A. P. Lambat, NAAC Coordinator



Ms. A. P. Lambat
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Minutes of the Meeting dated on 05.04.2024 Certificate Courses in Department of Chemistry

The meeting regarding the Certificate Courses run by Department of Chemistry was held on 5th April 2024 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal madam presided over the meeting.

Agenda of the meeting:

1. To confirm the minutes of the last meeting.
2. To review the completion of certificate course syllabus and to decide examination schedule the course.
3. Any other matter with the permission of the chair.

Following Members were present.

- | | |
|--------------------------------|-------------------------------|
| 1) Prof. Mrs. N. S. Dhoble | Member |
| 2) Dr. A. P. Lambat | IQAC Coordinator |
| 3) Prof. Mrs. A. S. Mahakalkar | Head, Department of Chemistry |
| 4) Prof. Mrs. M. P. Patil | Member |
| 5) Dr. Mrs. P. P. Chahande | Member |
| 6) Dr. Mrs. A. M. Duragkar | Member |
| 7) Dr. Mrs. P. P. Morey | Member |

Prof. A.S. Mahakalkar, Head, Department of Chemistry acted as secretary in the meeting. Head of Department welcomed the Chairperson, Hon'ble Principal and other members and called the meeting in order with permission of chairperson, read out agenda of the meeting and subsequently discussed the matter.

Item No. 1: To confirm the minutes of the last meeting.

Resolution : The minutes of the last meeting held on 11th December 2023 were read by the Head of Department of Chemistry and subsequently the minutes were unanimously approved.



N.S. Dhoble

Off. Principal
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Nagpur,

Item No. 2: To review the completion of certificate course syllabus and to decide examination schedule of the course.

Resolution: Hon'ble Principal madam overviewed the course completion of respective certificate courses run by department of chemistry and also guided about the examination pattern and schedule of examination to be commenced in this month.

Item No. 3: Any other matter with the permission of Chair.

Resolution: As there was no other matter to discuss, the head of department of chemistry sum up the meeting by expressing thanks for everyone's gracious attendance.

Name	Signature
1. Prof. Mrs. N. S. Dhoble	N. Dhoble
2. Dr. A. P. Lambat	A. P. Lambat
3. Prof. Mrs. A. S. Mahakalkar	Mrs. A. S. Mahakalkar
4. Prof. Mrs. M. P. Patil	M. P. Patil
5. Dr. Mrs. P. P. Chahande	P. Chahande
6. Dr. Mrs. A. M. Duragkar	A. M. Duragkar
7. Dr. Mrs. P. P. Morey	P. P. Morey



N. Dhoble

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Date : 15.04.2024

NOTICE

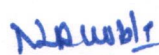
All the students enrolled for Certificate Course "Synthesis and Characterization of Inorganic Phosphors" are hereby informed that the timetable of theory and practical examination is as follows -

Date	Time
20.04.2024	11.00 am - 2.00 pm
29.04.2024	11.00 am - 2.00 pm

Take note of the same.


Dr. Mrs. A. M. Duragkar
Member,
Certificate Course
Sevadal Mahila Mahavidyalaya,
Nagpur




Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur
Certificate Course Examination 2023-2024
“SYNTHESIS AND CHARACTERIZATION OF PHOSPHORS”
(Department of Chemistry)

Time : Three Hours]

[Max. Marks: 60]

SECTION- A (40 Marks)

N.B. - (1) It is compulsory to attempt **ANY EIGHT** questions in section A which carry equal marks.
(2) All questions are compulsory in Section-B and carry equal marks.

- Q.1) What are the types of luminescence depending upon the nature of excitation sources?
Write their atleast one application. 5M
- Q.2) Name the instruments used for preparation and characterization of phosphors. 5M
- Q.3) Write a note on combustion synthesis method. 5M
- Q.4) Describe Fluorescence and phosphorescence on the basis of Jablonski Diagram. 5M
- Q.5) What are the three approaches to generate white light? Write names of
Ce, Nd, Sm, Gd and Tb. 5M
- Q.6) Write a note on
i) Concentration quenching
ii) Stokes Shift 5M
- Q.7) Write any five applications of
i) Luminescence
ii) LED 5M
- Q.8) Write a short note on CIE diagram. 5M
- Q.9) Define the terms-
i) Phosphor
ii) Activator
iii) Glow Curve
iv) Luminescence
v) Spectrophotofluorometer 5M
- Q.10) Explain principle of luminescence. 5M

SECTION- B

Multiple Choice Questions.

20M

- Q.1) Which of the following source is continuous source for photofluorometry.
A) Deuterium discharge lamp C) Xenon arc lamp
B) Mercury Vapour lamp D) Hollow cathode lamp
- Q.2) Fluorescence spectroscopy is-----spectroscopy?
A) Electric C) Physical
B) Mechanical D) Electromagnetic
- Q.3) Which light is utilized in fluorescent spectroscopy?
A) Infrared C) Ultraviolet
B) Laser D) Radar
- Q.4) Device that measures photoluminescence is-----
A) Phyto-meter C) Spirometer
B) Spectrophotofluorometer D) Potentiometer
- Q.5) Accuracy is defined as-
A) The closeness of the measured value
B) A measure of how often an experimental value can be repeated
C) The number of significant Figures used in a measurement
D) None of the above



Number

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- Q.6) Fluorescence efficiency in most of the molecules increases with
 A) Increasing temperature
 B) Increasing quencher concentration
 C) Increasing solvent viscosity
 D) None of the above
- Q.7) The probability of phosphorescence is due to which of the following transition
 A) $n \rightarrow \pi^*$
 B) $n \rightarrow \sigma^*$
 C) $\sigma \rightarrow \sigma^*$
 D) $\pi \rightarrow \pi^*$
- Q.8) The fluorescence intensity depends on all of the following except-
 A) Concentration
 B) Pathlength
 C) Polarity
 D) Intensity of incident radiation
- Q.9) The primary filter is placed in between
 A) Source and cell
 B) Source and detector
 C) Cell and detector
 D) Anywhere
- Q.10) What is photoluminescence?
 A) Any emission of light
 B) Any emission of light from excited electrons
 C) Any absorption of light
 D) Any absorption of light from excited electrons
- Q.11) The luminescence occurred due to chemical reactions is called as-
 A) Photoluminescence
 B) Thermoluminescence
 C) Chemiluminescence
 D) Bio-luminescence
- Q.12) Emission of light by fire flies, glow worms are due toluminescence
 A) Photoluminescence
 B) Thermoluminescence
 C) Chemiluminescence
 D) Bio-luminescence
- Q.13) Longform of element Tb is
 A) Thorium
 B) Teryllium
 C) Terbium
 D) None of the above
- Q.14) Which of the following element belongs to lanthanide series-
 A) Ce
 B) Sm
 C) Eu
 D) All of the above
- Q.15) Combination of which colour of the following results in white light-
 A) Red, Green, Blue
 B) Orange, Green, Yellow
 C) Red, Yellow, Green
 D) Red, Yellow, Green
- Q.16) Eu^{3+} doped phosphor shows excitation atwavelength
 A) 395nm and 466 nm
 B) 520 nm
 C) 405 nm and 466 nm
 D) None of the above
- Q.17) Which of the following is used as a fuel in combustion method for preparation of phosphors
 A) Thiourea
 B) Urea
 C) Ammonium nitrate
 D) Petroleum ether
- Q.18) Europium doped phosphor shows emission inlight region.
 A) Yellow
 B) Red
 C) Phosphor
 D) White
- Q.19) Compound able to emit light is called as....
 A) Dopant
 B) Inorganic material
 C) Phosphor
 D) None of the above
- Q.20) Dy^{3+} doped phosphor shows highest intensity excitation peak atwavelength
 A) 395nm
 B) 405 nm
 C) 405 nm
 D) 350 nm

E) None of the above



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Certificate Course Examination 2023-2024

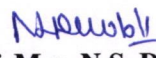
Name of Exam Centre : Sevadal Mahila Mahavidyalaya, Nagpur
Title of the Certificate Course: **Synthesis and Characterization of Inorganic Phosphors**

Summary of Marks

S.N.	Name of Student	Class	Theory Marks	Practical Marks	Total Marks
1	Ms. Alfiya Naaz	B.Sc Sem VI	58	30	88
2	Ms. Anam Aslam Khan	B.Sc. Sem VI	57	30	87
3	Ms. Ashlesha Chimantrawar	B.Sc. Sem VI	29	25	54
4	Ms. Ashlesha Jamaiwar	B.Sc. Sem VI	44	25	69
5	Ms. Bobby R. Yawalkar	B.Sc. Sem VI	25	20	45
6	Ms. Chitra Kaikade	B.Sc. Sem VI	52	30	82
7	Ms. Divya Patle	B.Sc. Sem VI	52	25	77
8	Ms. Janvi Awsare	B.Sc. Sem VI	30	24	54
9	Ms. Kalyani Lende	B.Sc. Sem VI	29	25	54
10	Ms. Komal Shatrakar	B.Sc. Sem VI	49	25	74
11	Ms. Krutika Vaidya	B.Sc. Sem VI	50	30	80
12	Ms. Maliha Parveen Sheikh	B.Sc. Sem VI	28	25	53
13	Ms. Manisha Farkade	B.Sc. Sem VI	42	25	67
14	Ms. Manjiri Bante	B.Sc. Sem VI	59	30	89
15	Ms. Mansi Kanpillewar	B.Sc. Sem VI	25	25	50
16	Ms. Megha Pise	B.Sc. Sem VI	54	30	84
17	Ms. Naba Ismail Sheikh	B.Sc. Sem VI	43	28	71
18	Ms. Payal Nakade	B.Sc. Sem VI	51	30	81
19	Ms. Prajakta S. Yende	B.Sc. Sem VI	31	25	56
20	Ms. Pranali Wathore	B.Sc. Sem VI	30	20	50
21	Ms. Pranali Kelwade	B.Sc. Sem VI	58	30	88
22	Ms. Priya Wanaskar	B.Sc. Sem VI	AA	AA	AA
23	Ms. Priyanka Ubale	B.Sc. Sem VI	48	30	78
24	Ms. Sakshi Thawkar	B.Sc. Sem VI	44	30	74
25	Ms. Sakshi Dahane	B.Sc. Sem VI	23	25	48
26	Ms. Shristi Mahajan	B.Sc. Sem VI	45	30	75
27	Ms. Shristi Deshkar	B.Sc. Sem VI	42	20	62
28	Ms. Samruddhi Akhud	B.Sc. Sem VI	27	25	52
29	Ms. Tanvi Bhongade	B.Sc. Sem VI	48	28	76
30	Ms. Vaishnavi Umak	B.Sc. Sem VI	31	25	56
31	Ms. Anamika Chate	B.Sc. Sem VI	54	30	84
32	Ms. Sidhhi Hulke	B.Sc. Sem VI	57	30	87
33	Ms. Sushma Urkude	B.Sc. Sem VI	59	28	87
34	Ms. Varsha Tonpe	B.Sc. Sem VI	54	27	81
35	Ms. Chetana Jangade	B.Sc. Sem VI	56	26	82

Total No. of Students Enrolled= 35, No. of Students Absent = 00 Total No. of Students Appeared = 35

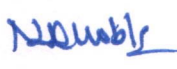

Dr. Mrs. A.M. Duragkar
(Member)


Prof. Mrs. N.S. Dhoble
(Course Coordinator)

Course Co-ordinators:

- 1 Dr. (Mrs.) N. S. Dhoble, Principal, Sevadal Mahila Mahavidyalaya, Nagpur.
- 2 Dr. (Mrs.) A. M. Duragkar, Associate Professor, Department of Chemistry, Sevadal Mahila Mahavidyalaya, Nagpur.




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Nagpur.



Sevalal Shikshan Sanstha's
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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Alfiya Naaz

she has successfully completed the Certificate Course in
"Synthesis & Characterization of Inorganic Phosphors",
conducted by the Department of Chemistry.

Date : 30/04/2024

Prof. (Mrs.) Nirupama S. Dhoble
Course Coordinator

Dr. (Mrs.) A. M. Duragkar
Member

Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal
Sevalal Mahila Mahavidyalaya, Nagpur



Sevalal Mahila Mahavidyalaya
Off. Principal

Nagpur