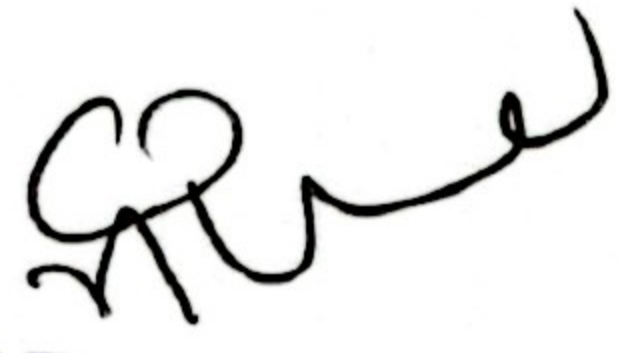


**M. B. More Foundation's
Arts, Commerce and Science Women College,
Dhatav, Tal-Roha.**

Certificate Course (AY 2021-2022)

| | | | |
|--|---|---|--|
| Course Name | : | Introduction to 'Techniques in Water Purification' | |
| Objectives | : | To aware students about the different purification procedures reducing concentration of contaminants (soil residues, organic and inorganic substances) from water in drinking and irrigation use. | |
| Eligibility | : | Students in T.Y.B.Sc. | |
| Duration | : | 01 Month | |
| Fees | : | 200/- per Student | |
| Trainer | : | Ms. Nikita Mangesh Mahadik, Assistant Professor in Chemistry M. B. More Women College | Ms. Pratiksha Prakash Gharge Assistant Professor in Chemistry M. B. More Women College |
| | | Ms. Pratima Vaibhav Bhoir, Assistant Professor in Chemistry, M. B. More Women College | |
| Course Co-ordinator | : | Ms. Pratiksha Prakash Gharge Assistant Professor in Chemistry, M. B. More Women College | |
| Number of Students Enrolled | : | 59 | |
| Number of Students Completed the Course | : | 57 | |
| Course Outcome | : | Students can apply their knowledge and skills in water treatment in various field such as medical, pharmacological, chemical and Industrial sectors. At the same time, they an demonstrate importance of purification of water and benefits of consuming healthy minerals in water to their families. | |




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At-Dhatav, Tal-Roha, Dist-Raigad, 402 116



(Certificate Course A. Y. 2021-22)

Enrollment List

Certificate Course in 'Introduction to Techniques in Water Purification'

| Sr. No. | Permanent Number | Name of Student | Signature |
|---------|------------------|----------------------------|---------------|
| 1 | 3226 | Bakade Neha Nathuram | N. N. Bakade |
| 2 | 3227 | Bhagat Shital Namdev | Bhagat |
| 3 | 3228 | Bhoi Tejal Tanaji | Bhoi |
| 4 | 3229 | Bhoir Sayali Santosh | Bhoir |
| 5 | 3230 | Bhoir Vishakha Dnyandev | Bhoir |
| 6 | 3231 | Bhosale Priti Damodar | P. D. Bhosale |
| 7 | 3232 | Bhuvad Mayuri Madhukar | Bhuvad |
| 8 | 3233 | Chalke Sejal Shashikant | Chalke |
| 9 | 3235 | Chavarekar Sakshi Digambar | Chavarekar |
| 10 | 3237 | Dabade Nivedita Nitin | Nivedita |
| 11 | 3281 | Deshmukh Sakshi Naresh | Deshmukh |
| 12 | 3239 | Dhadse Pranoti Prakash | Dhadse |
| 13 | 3240 | Dhanse Farheen Faruk | Dhanse |
| 14 | 3253 | Gaikar Janhavi Janardan | Janhavi |
| 15 | 3243 | Ganve Jagruti Jayendra | Ganve |
| 16 | 3246 | Gole Dakshata Pradip | Dakshata |
| 17 | 3247 | Gorivale Sakshi Ravindra | Sakshi |
| 18 | 3250 | Jadhav Nilima Suryakant | Jadhav |
| 19 | 3248 | Jadhav Akanksha Anil | Akanksha |
| 20 | 3249 | Jadhav Jagruti Janardan | Jagruti |


| Sr. No. | Permanent Number | Name of Student | Signature |
|---------|------------------|-------------------------|--------------|
| 21 | 3251 | Jamdade Priti Vithoba | Jamdade |
| 22 | 3252 | Jangam Ruchita Suresh | Ruchita |
| 23 | 3254 | Kadam Sneha Anant | Sneha |
| 24 | 3255 | Kamble Ankita Rajendra | Aamble |
| 25 | 3256 | Kamble Smita Gopal | Smita Kamble |
| 26 | 3257 | Kangane Rutuja Jayendra | Kangane |
| 27 | 3258 | Kanhekar Sukanya Sharad | Kanhekar |
| 28 | 3259 | Kapse Megha Suresh | M.S. Kapse |
| 29 | 3260 | Kaskar Muskan Akil | Muskan |
| 30 | 3261 | Khot Sayali Suresh | Sayali |
| 31 | 3262 | Kurle Neha Gajanan | Kurle |
| 32 | 3264 | Mhatre Prachi Vaman | P.V. Mhatre |
| 33 | 3265 | Mhatre Priya Laxman | Pmhatre |
| 34 | 3266 | Mohite Amisha Arun | Amohite |
| 35 | 3268 | More Damini Devram | Dmore |
| 36 | 3270 | More Sayali Changu | Sayali |
| 37 | 3271 | Nakte Divya Ramesh | D.R. Nakte |
| 38 | 3272 | Nande Priti Ravindra | Nande |
| 39 | 3273 | Navshe Rina Ram | Navshe |
| 40 | 3274 | Nikam Vijaya Vilas | Nikam |
| 41 | 3275 | Nivate Mansi Sandesh | Nivate |
| 42 | 3276 | Pakhar Pratiksha Sanjay | P.S. Pakhar |
| 43 | 3297 | Rasal Sakshi Shailesh | Rasal |



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| Sr. No. | Permanent Number | Name of Student | Signature |
|---------|------------------|----------------------------|----------------------|
| 44 | 3105 | Ratate Shweta Pandurang | <u>Ratate</u> |
| 45 | 3278 | Rohekar Kajal Kamalakar | <u>Rohekar</u> |
| 46 | 3279 | Ruparel Kiran Pravin | <u>K. Ruparel.</u> |
| 47 | 3282 | Sanap Rutuja Dattatrey | <u>Sanap.</u> |
| 48 | 3154 | Shelke Neha Ravindra | <u>Shelke.</u> |
| 49 | 3284 | Shigavan Sanjana Sandip | <u>S.S. Shigavan</u> |
| 50 | 3293 | Shinde Vaishnavi Rohidas | <u>Vaishnavi</u> |
| 51 | 3285 | Shingare Vinanti Vinayak | <u>Vshingare</u> |
| 52 | 3287 | Sutar Prajwali Prakash | <u>P.sutar</u> |
| 53 | 3288 | Tadkar Manasi Mahadev | <u>Tadkar</u> |
| 54 | 3289 | Tadkar Nitisha Dnyaneshwar | <u>Tadkar</u> |
| 55 | 3298 | Tatkare Kshitija Prashant | <u>kshitija</u> |
| 56 | 3290 | Tatkare Shweta Santosh | <u>Tatkare.</u> |
| 57 | 3291 | Thamke Kishori Keshav | <u>(K)Thamke.</u> |
| 58 | 3292 | Tikone Sakshi Harichandra | <u>Tikone</u> |
| 59 | 3294 | Wadkar Ankita Namdev | <u>Anudkar</u> |




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 At. Po. Dhatav, Tal. Roha, Dist. Raigad



Short term Certificate Course in
'Introduction to Techniques in Water Purification'

Department : Science

Duration : 38 hrs

Co-ordinator : Ms. Pratiksha Gcharge

Syllabus

1) Water resources:

a) Natural resources of water: surface water, Ground water, Frozen water

2) Uses of water:

a) Domestic

b) Agriculture

c) Industrial

3) Threats of water resources:

a) Water pollution

b) Climate change

4) Water treatment process:

a) sedimentation

b) Filtration

c) pH treatment

5) Industrial water treatment process:

a) Primary treatment

b) Secondary treatment

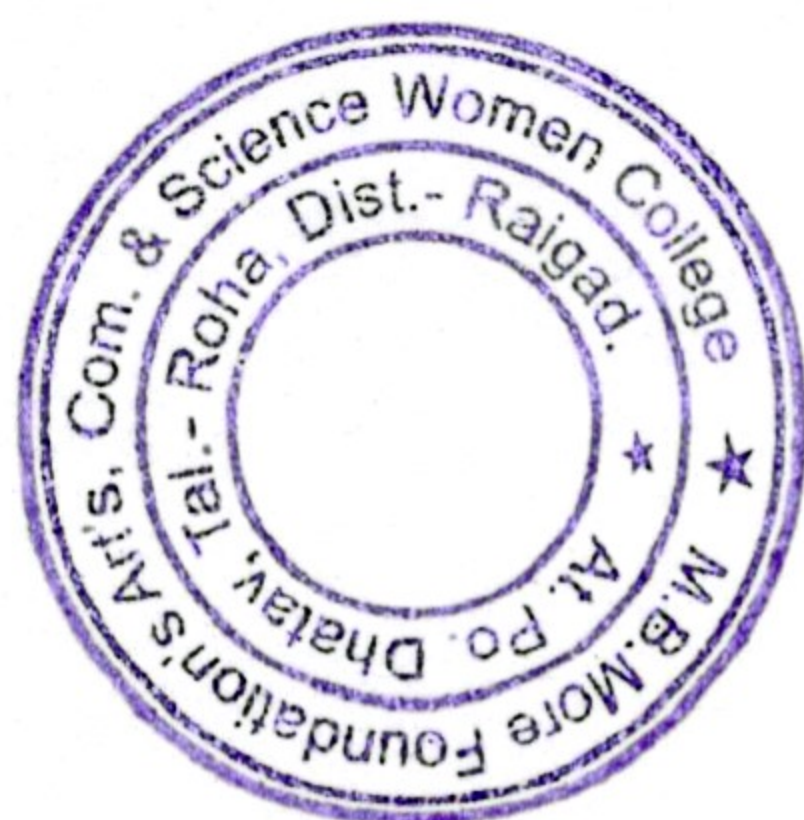
c) Tertiary treatment


6) Practical:

a) Determination of hardness of different types of water samples.

b) Distillation of water sample

7) Field visit for practical exposure to Techniques in Water purification.




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M.B.More Foundation's Arts ,Commerce & Science Women College Dhatav, Roha-Raigad.

Examination : Online Examination for certificate course in "Techniques in water Purification".

Class : T.Y.BSc
Day/Date : Sunday (12/12/2021)
Time : 10:00 am to 11:00 am
Marks : 25 M
Duration : 1hr

* Required

1. Student Name : *

2. Email-id *

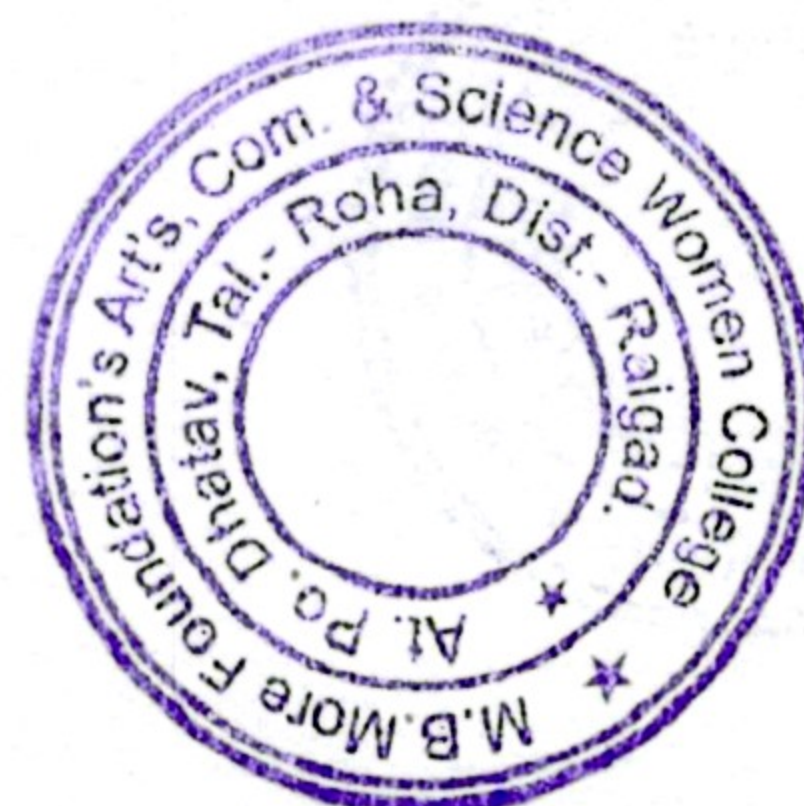
3. Roll No *

4. 1) _____ is any boay of water about ground.

1 point

Mark only one oval.

- A) Ground water
 B) Surface Water
 C) Frozen Water
 D) Marine Water



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5. 2) _____ water does not evaporate.

1 point

Mark only one oval.

- A) Ground
- B) Surface
- C) Frozen
- D) Fresh

6. 3) The Freezing point of water is _____.

1 point

Mark only one oval.

- A) 374 K
- B) 400 K
- C) 273 K
- D) 250 K

7. 4) Around _____ of freshwater withdraw go into agriculture.

1 point

Mark only one oval.

- A) 95%
- B) 70%
- C) 50%
- D) 75%


8. 5) The water that your well draws from under the ground is an example of _____.

1 point

Mark only one oval.

- A) Frozen water
- B) surface water
- C) Ground water
- D) Fresh water




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9. 6) _____ is the common name of frozen water.

1 point

Mark only one oval.

- A) Ice
 B) Honey
 C) Water
 D) Sewage

10. 7) One of the major disadvantage of frozen water is _____.

1 point

Mark only one oval.

- A) will need treatment
 B) cause of constipation
 C) seasonal
 D) Environmentally damaging

11. 8) _____ is the release of substance into bodies of water.

1 point

Mark only one oval.

- A) Climate change
 B) Water pollution
 C) Air pollution
 D) Soil pollution


12. 9) Fertilizers containing nitrogen produce _____.*

1 point

Mark only one oval.

- A) Nitric Acid
 B) Nitrous oxide
 C) Carbon dioxide
 D) Nitrogen Carbide




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13. 10) _____ happens when toxins and pollutants in the water are consumed by aquatic animals.

1 point

Mark only one oval.

- A) Disruption of food chain
- B) Deforestation
- C) Eutrophication
- D) Water pollution

14. 11) _____ water is used for fabricating, washing, diluting, cooling etc

1 point

Mark only one oval.

- A) Domestic
- B) Agriculture
- C) Industrial
- D) Marine

15. 12) Gases such as _____ and _____ trap heat in the atmosphere.

1 point

Mark only one oval.

- A) CO₂, NO₂
- B) CH₄, NO₂
- C) CO₂, O₂
- D) CO₂, CH₄


16. 13) _____ is our First aim to prevent water pollution.

1 point

Mark only one oval.

- A) Conserving water
- B) Deforestation
- C) Treatment of Sewage
- D) Marine dumping




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17. 14)Only___ water is fresh water.

1 point

Mark only one oval.

- A) 3%
- B)17%
- C)70%
- D) 13%

18. 15)The main advantage of surface water is _____.

1 point

Mark only one oval.

- A) It does not evaporate
- B) It provide moisture to large amount of vegetation.
- C) Easy to abstract water by direct pumping
- D) Environmentally damaging

19. 16) _____ is any process that improves the quality of water to make it appropriate for a specific end use.

1 point

Mark only one oval.

- A) pH
- B) Filtration
- C) water Treatment
- D) Coagulation

20. 17)To Kill bacteria,viruses,pathoges ----- is used.

1 point

Mark only one oval.

- A)coagulation
- B)sand filtration
- C)pre chlorination
- D)ultra- violet



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21. 18) ----- Is the technique of removing pollutants based on their particle size. 1 point

Mark only one oval.

- A)coagulation
 B)filtration
 C) pre-chlorination
 D)ultra- violet

22. 19) Partial filtration &----- are the two main forms of waste water filtration . 1 point

Mark only one oval.

- A) Gravity settling
 B)solid separation filtration
 C)sedimentation
 D) membrane filtration

23. 20) -----raise the PH of water to near neutral when injected in to a water system 1 point

Mark only one oval.

- A)sodium hydroxide
 B) methyl acetate
 C)Acetone
 D) Oxalic acid




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24. 21) API stand for

1 point

Mark only one oval.

- A)Active Pollufant ingredient
- B)Active pharmaceutical intgredient
- C)American petroleum institute
- D)American processure of India

25. 22) Most solids can be removed using simple----- techniques.

1 point

Mark only one oval.

- A) Flow distributions
- B) convare
- C)sedmentation
- D) parallel plate & separator

26. 23) API separator is a -----

1 point

Mark only one oval.


- A) electric separation
- B)magnetic separation
- C)flotation separation
- D)gravity separation

27. 24) API separator device designed by using----- to defire the rise vel----- 1 point

Mark only one oval.

- A)Lambered-beer' s law
- B) Kholaraush law
- C)stokes law
- D)Boly's law




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28. 25) A major chemicals complex was blocked in the _____.

1 point

Mark only one oval.

- A) 1970
- B) 1960
- C) 1980
- D) 1990

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Google Forms

(Bharge)
In-charge
Certificate Course
Committee
(P.P. Charge)

(Signature)
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(Signature)
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M.B.More Foundation's
Arts , Commerce and Science Women College
At.Dhatav , Tal- Roha-Raigad.




Certificate Course in ' Techniques in Water Purifications'

Final Marklist

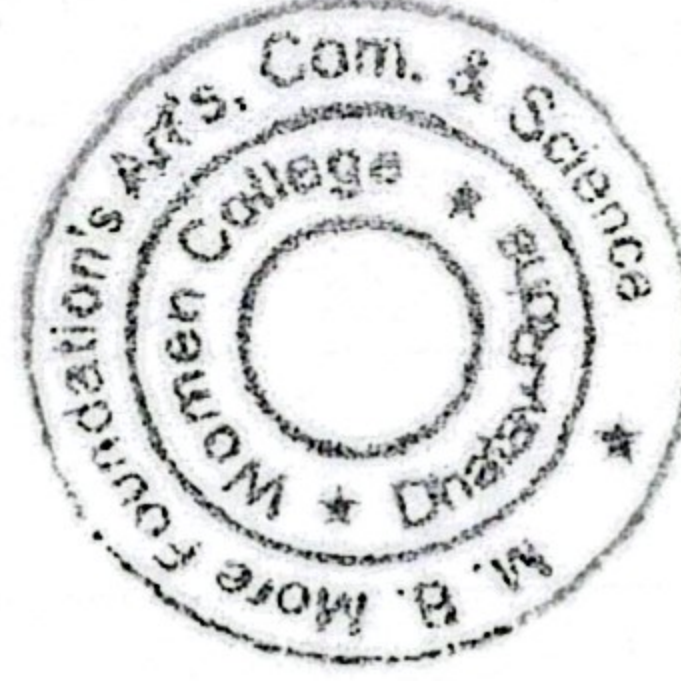


| Sr No. | Name of Student | Class | Theory | Project Work | Total Score |
|--------|----------------------------|---------|------------|--------------|-------------|
| 1 | Amisha arun mohite | T.Y.BSc | 15.00 / 25 | 22/25 | 37 |
| 2 | Ankita rajendra kamble | T.Y.BSc | 17.00 / 25 | 21/25 | 38 |
| 3 | Bakade neha nathuram | T.Y.BSc | 17.00 / 25 | 22/25 | 39 |
| 4 | Bhagat Shital Namdev | T.Y.BSc | 20.00 / 25 | 24/25 | 44 |
| 5 | Bhoir Sayali Santosh | T.Y.BSc | 22.00 / 25 | 23/25 | 45 |
| 6 | Bhoir Vishakha Dnyandev. | T.Y.BSc | 23.00 / 25 | 23/25 | 46 |
| 7 | Bhosale Priti Damodar | T.Y.BSc | 22.00 / 25 | 23/25 | 45 |
| 8 | Dabade Nivedita Nitin | T.Y.BSc | 20.00 / 25 | 25/25 | 45 |
| 9 | Dakshata Pradip Gole | T.Y.BSc | 17.00 / 25 | 21/25 | 38 |
| 10 | Damini Devram more | T.Y.BSc | 18.00 / 25 | 22/25 | 40 |
| 11 | Dhadse pranoti Prakash | T.Y.BSc | 12.00 / 25 | 24/25 | 36 |
| 12 | Farheen Faruk Dhanse | T.Y.BSc | 23.00 / 25 | 25/25 | 48 |
| 13 | Ganave jayendra jagruti | T.Y.BSc | 20.00 / 25 | 23/25 | 43 |
| 14 | Gorivale sakshi Ravindra | T.Y.BSc | 20.00 / 25 | 23/25 | 43 |
| 15 | Jadhav Akanksha Anil | T.Y.BSc | 25.00 / 25 | 23/25 | 48 |
| 16 | Jadhav Jagruti Janaradan | T.Y.BSc | 19.00 / 25 | 23/25 | 42 |
| 17 | Jamdade Priti vithoba | T.Y.BSc | 19.00 / 25 | 25/25 | 44 |
| 18 | Jangam Ruchita Suresh | T.Y.BSc | 13.00 / 25 | 23/25 | 36 |
| 19 | Janhavi janardan gaikar | T.Y.BSc | 23.00 / 25 | 22/25 | 45 |
| 20 | Kadam Anant Sneha | T.Y.BSc | 20.00 / 25 | 24/25 | 44 |
| 21 | Kajal kamlakar Rohekar | T.Y.BSc | 16.00 / 25 | | 16 |
| 22 | Kapse megha suresh | T.Y.BSc | 25.00 / 25 | 21/25 | 46 |
| 23 | Kishori Thamke | T.Y.BSc | 21.00 / 25 | | 21 |
| 24 | KURLE NEHA NANDINI GAJANAN | T.Y.BSc | 22.00 / 25 | 21/25 | 43 |
| 25 | Mayuri Madhukar Bhuvad | T.Y.BSc | 24.00 / 25 | 23/25 | 47 |
| 26 | Muskan Akil kaskar | T.Y.BSc | 23.00 / 25 | 22/25 | 45 |
| 27 | Nakte Divya Ramesh | T.Y.BSc | 22.00 / 25 | 22/25 | 44 |
| 28 | Nande Priti Ravindra | T.Y.BSc | 20.00 / 25 | 21/25 | 41 |
| 29 | Navshe Rina Ram | T.Y.BSc | 18.00 / 25 | 22/25 | 40 |
| 30 | Nikam Vijaya Vilas | T.Y.BSc | 21.00 / 25 | 22/25 | 43 |
| 31 | Nilima suryakant jadhav | T.Y.BSc | 21.00 / 25 | 23/25 | 44 |
| 32 | Nivate mansi sandesh | T.Y.BSc | 20.00 / 25 | 22/25 | 42 |
| 33 | Pakhar Pratiksha Sanjay | T.Y.BSc | 15.00 / 25 | 22/25 | 37 |
| 34 | Prajwali prakash sutar | T.Y.BSc | 19.00 / 25 | 22/25 | 44 |
| 35 | Priya Laxman Mhatre | T.Y.BSc | 21.00 / 25 | 23/25 | 44 |
| 36 | Rasal sakshi Shailesh | T.Y.BSc | 18.00 / 25 | 22/25 | 40 |
| 37 | Ruparel Kiran Pravin | T.Y.BSc | 19.00 / 25 | 24/25 | 43 |
| 38 | Rutuja Jayendra Kangane | T.Y.BSc | 18.00 / 25 | 25/25 | 44 |
| 39 | Sakshi digambar chavarekar | T.Y.BSc | 15.00 / 25 | 22/25 | 37 |


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| | | | | | |
|----|------------------------------|---------|------------|-------|----|
| 40 | Sakshi Harichandra Tikone | T.Y.BSc | 25.00 / 25 | 21/25 | 46 |
| 41 | Sakshi naresh deshमुख | T.Y.BSc | 17.00 / 25 | 22/25 | 39 |
| 42 | Sanap Rutuja Dattatrey | T.Y.BSc | 20.00 / 25 | 23/25 | 43 |
| 43 | Sayali Changu more | T.Y.BSc | 13.00 / 25 | 22/25 | 35 |
| 44 | Sayali Suresh Khot | T.Y.BSc | 25.00 / 25 | 21/25 | 46 |
| 45 | Sejal shashikant chalke | T.Y.BSc | 25.00 / 25 | 23/25 | 48 |
| 46 | Shigavan Sanjana sandip | T.Y.BSc | 19.00 / 25 | 21/25 | 40 |
| 47 | Shinde Vaishnavi Rohidas | T.Y.BSc | 19.00 / 25 | 23/25 | 42 |
| 48 | Shingare vinanti vinayak | T.Y.BSc | 17.00 / 25 | | 17 |
| 49 | Shweta pandurang ratate | T.Y.BSc | 21.00 / 25 | 23/25 | 44 |
| 50 | Smita Kamble | T.Y.BSc | 15.00 / 25 | 22/25 | 37 |
| 51 | Sukanya Sharad Kanhekar | T.Y.BSc | 21.00 / 25 | 20/25 | 41 |
| 52 | Tadkar manasi mahadev | T.Y.BSc | 15.00 / 25 | 23/25 | 38 |
| 53 | Tadkar Nitisha Dnyaneshwar | T.Y.BSc | 15.00 / 25 | 22/25 | 37 |
| 54 | Tatkare kshitija prashant | T.Y.BSc | 19.00 / 25 | 23/25 | 42 |
| 55 | Tatkare Shweta Santosh | T.Y.BSc | 20.00 / 25 | 22/25 | 42 |
| 56 | Tejal tanaji bhoi | T.Y.BSc | 19.00 / 25 | 22/25 | 41 |
| 57 | Wadkar Ankita Namdev Namrata | T.Y.BSc | 22.00 / 25 | 22/25 | 44 |

Phalge
In-charge
Certificate Course
Committee



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At. Po. Dhatav, Tal. Roha, Dist. Raigarh



Shree
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M. B. MORE FOUNDATION'S
ARTS, COMMERCE AND SCIENCE WOMEN COLLEGE
DHATAV - ROHA, RAIGAD.



Certificate

This is to Certify that

Ms. Sutar Prajwali Prakash

Class: T.Y. B.Sc.

participated in the short term certificate course

on

'Techniques in Water Purifications'

Conducted by

College certificate course committee

from

29/11/2021 to 05/02/2022 (38 ^{Has} ~~weeks~~)

And completed successfully

with A+ *Grade*



Date: **14 MAY 2022**




Coordinator


PRINCIPAL
M. B. More Foundation's

Arts, Com. & Science Women College
At. Po. Dhatav, Tal. Roha, Dist. Raigar




M. B. More Foundation's
Art's, Commerce and Science Women College,
Dhatav, Tal-Roha.

Certificate Course (AY 2022-23)

| | | |
|--|---|---|
| Name | : | Introduction to 'Techniques in Water Purification' |
| Objectives | : | To aware students about the different purification procedures reducing concentration of contaminants (soil residues, organic and inorganic substances) from water in drinking and irrigation use. |
| Eligibility | : | Students in T.Y.B.Sc. |
| Duration | : | 01 Month |
| Fees | : | |
| Trainer | : | Mrs. Pratima Vaibhav Bhoir, Assistant Professor in Chemistry, M. B. More Women College Ms. Mamtakumari R. Bind, Assistant Professor in Chemistry, M. B. More Women College Ms. Nikita Mangesh Mahadik Assistant Professor in Chemistry, M. B. More Women College |
| Course Co-ordinator | : | Ms. Akshata Anant Thakur Assistant Professor in Zoology, M. B. More Women College |
| Number of Students Enrolled | : | 63 |
| Number of Students Complete the Course | : | 61 |
| Course Outcome | : | Students can apply their knowledge and skills in water treatment in various field such as medical, pharmacological, chemical and Industrial sectors. At the same time, they an demonstrate importance of purification of water and benefits of consuming healthy minerals in water to their families. |




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M. B. More Foundation's
Arts, Commerce and Science Women College
At-Dhatav, Tal-Roha, Dist-Raigad, 402 116



(Certificate Course A.Y. 2022-23)

Enrollment List

Certificate Course in 'Introduction to Techniques in Water Purification'

| Sr. No. | Permanent Number | Name of Student | Signature |
|---------|------------------|----------------------------|-------------|
| 1 | 3301 | Ambruskar Mayuri Rohidas | Ambruskar. |
| 2 | 3302 | Ambruskar Siddhi Bhagoji | Ambruskar |
| 3 | 3304 | Bamugade Dipti Pramod | Bamugade |
| 4 | 3305 | Bangi Daniya Kasim | Daniya |
| 5 | 3306 | Bhagat Chaitali Tukaram | Bhagat |
| 6 | 3307 | Bhagat Mayuri Maruti | Bhagat |
| 7 | 3308 | Bhagat Rujvi Mukund | R.M. Bhagat |
| 8 | 3309 | Bhalekar Palak Ganpat | Bhalekar |
| 9 | 3311 | Birwadkar Bhavika Dattaram | Bhavika |
| 10 | 3312 | Darji Fiza Mohsin | Fizarji |
| 11 | 3313 | Deshmukh Juili Naresh | Deshmukh |
| 12 | 3238 | Deshmukh Ketaki Devanand | Deshmukh |
| 13 | 3316 | Gaikar Jayashri Pandurang | Gaikar |
| 14 | 3317 | Gaikar Ruchita Ramchandra | Gaikar |
| 15 | 3318 | Gaikar Sakshi Ghanashyam | Gaikar |
| 16 | 3319 | Gaikwad Prachi Rashtrapal | RATWAD |
| 17 | 3320 | Ingle Prerana Subhash | Bingle |
| 18 | 3363 | Jadhav Ketaki Dnyaneshwar | K.D. Jadhav |
| 19 | 3322 | Kadam Akshata Anant | Kadam |
| 20 | 3366 | Kadam Pooja Suresh | Kadam |

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| Sr. No. | Permanent Number | Name of Student | Signature |
|---------|------------------|-------------------------------|----------------------|
| 21 | 3323 | Kadav Shrushti Keshav | <i>Kadav</i> |
| 22 | 3324 | Kaskar Mahek Shakil | <i>Kaskar</i> |
| 23 | 3325 | Kazi Uzma Javed | <i>Kazi</i> |
| 24 | 3326 | Khaire Neha Suresh | <i>Neha</i> |
| 25 | 3327 | Khamkar Afrah Altaf | <i>Afrab</i> |
| 26 | 3329 | Kumavat Khushbu Mangilal | <i>Kum</i> |
| 27 | 3330 | Lokhande Amisha Ashok | <i>Amisha</i> |
| 28 | 3331 | Mahadik Divya Ganesh | <i>Mahadik</i> ... |
| 29 | 3332 | Malusare Prajakta Chandrakant | <i>Prajakta</i> |
| 30 | 3333 | Mane Dipali Chandrakant | <i>Dmane</i> |
| 31 | 3334 | Mane Sanika Santosh | <i>Smane</i> |
| 32 | 3335 | Mane Yamini Yashwant | <i>Ymane</i> |
| 33 | 3336 | Manhas Simran Kartarsingh | <i>S. Manhas</i> |
| 34 | 3337 | Mhaskar Komal Rajesh | <i>K. R. Mhaskar</i> |
| 35 | 3338 | Mhatre Samiksha Anant | <i>Mhatre</i> |
| 36 | | | |
| 37 | 3340 | More Dakashata Mahesh | <i>Dmore</i> |
| 38 | 3367 | More Snehal Ananta | <i>Smore</i> |
| 39 | 3341 | More Vaishnavi Sanjay | <i>Vmore</i> |
| 40 | 3342 | Nimbare Shrutika Sachin | <i>Shrutika</i> |
| 41 | 3343 | Padwal Karina Balavant | <i>Kpadwal</i> |
| 42 | 3344 | Padwal Vijita Laxman | <i>Vijita</i> |
| 43 | 3345 | Pardeshi Pooja Kiran | <i>Pooja</i> |



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| Sr. No. | Permanent Number | Name of Student | Signature |
|---------|------------------|-----------------------------|---------------------|
| 44 | 3346 | Patil Lina Lahu | <u>Patil</u> |
| 45 | 3347 | Rajiwale Prerana Vijay | <u>Rajiwale</u> |
| 46 | 3348 | Rajiwale Priyanka Shivaji | <u>Rajiwale</u> |
| 47 | 3349 | Roge Anam Akbar | <u>Roge</u> |
| 48 | 3350 | Roge Tahura Azim | <u>T. A. Roge</u> |
| 49 | 3351 | Savarkar Prashali Sonu | <u>Savarkar</u> |
| 50 | 3352 | Sawant Rakhi Rajendra | <u>Sawant</u> |
| 51 | 3353 | Shaikh Shabana Kasim | <u>Shaikh</u> |
| 52 | 3354 | Shinde Pratiksha Paresh | <u>P. P. Shinde</u> |
| 53 | 3355 | Shinde Tanvi Ganesh | <u>Tanvi</u> |
| 54 | 3356 | Shirke Prajakta Ganesh | <u>Shirke</u> |
| 55 | 3310 | Tejashree Bhoir Tukaram | <u>Bhoir</u> |
| 56 | 3357 | Thite Mansi Maruti | <u>Thite</u> |
| 57 | 3358 | Thite Nishigandha Datta | <u>Thite</u> |
| 58 | 3359 | Thite Sakshi Santosh | <u>Thite</u> |
| 59 | 3360 | Tikone Vrushali Sudhir | <u>Tikone</u> |
| 60 | 3361 | Ulde Ayesha Salim | <u>Ulde</u> |
| 61 | 3362 | Waghavale Pranali Prakash | <u>Pravali</u> |
| 62 | 3364 | Waghmare Khushi Hirachandra | <u>Khushi</u> |
| 63 | 3365 | Yadav Rashmi Gajanan | <u>Ryadav</u> |




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Dhatav, Tal-Roha

Short term Certificate Course in
'Introduction to Techniques in Water Purification'

Department: Science

Duration: 38 hrs

Co-ordinator: Ms. Akshata A. Thakur



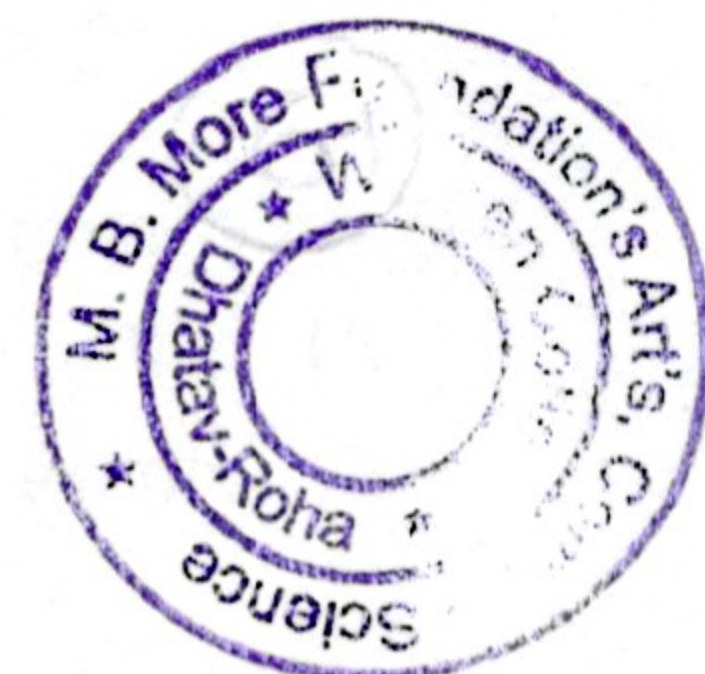
Syllabus

- 1) **Water resources**
 - a) Natural resources of water : surface water, Ground water, Frozen water
- 2) **Uses of water:**
 - a) Domestic
 - b) Agriculture
 - c) Industrial
- 3) **Threats of water resources:**
 - a) Water pollution
 - b) Climate change
- 4) **Water treatment process:**
 - a) Sedimentation
 - b) Filtration
 - c) pH treatment
- 5) **Industrial water treatment process:**
 - a) Primary treatment
 - b) Secondary treatment
 - c) Tertiary treatment
- 6) **Practical :**
 - a) Determination of hardness of different types of water samples.
 - b) Distillation of water sample
- 7) **Field visit for practical exposure to Techniques in Water purification.**

A. A. Thakur
In-charge
Certificate course
Committee
(A. A. Thakur)

[Signature]
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University of Mumbai
M.B.More Foundation's
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At. Dhatav, Tal.Roha, dist.Raigad.




Examination: Certificate course in 'Introduction to Techniques in Water Purification'

Class : T.Y.B.Sc.(Chemistry)
Day/Date : Wednesday, 07th Dec.2022

Marks : 25
Duration : 1 hr.

Q.1) Tick the correct alternative.

- 1) Less than _____ is stored as groundwater in the world's aquifers
A) 10% B) 20% C) 30% D) 40%
- 2) _____ fresh water exists on earth.
A) 1.5% B) 2.5% C) 3.5% D) 4.5%
- 3) _____ is any body of water above ground
A) Ground water B) Surface water C) Frozen water D) Marine water
- 4) Which of the following is a source of freshwater?
A) Groundwater B) Rainwater C) Surface run-off D) All of the above
- 5) The formation of clouds is due to _____
A) Evaporation B) Condensation C) Precipitation D) All of the above
- 6) Which of the following are the primary causes of water pollution?
A) Plants B) Animals C) Human activities D) None of these
- 7) Which of the following techniques is used to determine the concentration of odour compounds in the given water sample?
A) Settling B) Flushing C) Stripping D) Chlorination
- 8) This process is functional in removing carbon dioxide from the atmosphere
A) Lightning B) Deforestation C) Burning of fossil fuel D) Photosynthesis
- 9) Which of the following is not a major greenhouse gas?
A) Ozone B) Water vapour C) Methane D) Carbon dioxide
- 10) The detention time for sedimentation aided with coagulation ranges from
A) 4 to 8 hours B) 2 to 4 hours C) 24 hours D) 8 to 10 hours
- 11) For a given discharge, the efficiency of sedimentation tank can be increased by
A) Increasing the depth of the tank
B) Increasing the surface area of the tank
C) Decreasing the depth of the tank
D) Decreasing the surface area of the tank
- 12) The uniformity coefficient of filter media in a rapid sand filter varies from
A) 0.2 to 0.5 B) 0.8 to 1.2 C) 0.5 to 0.8 D) 1.2 to 1.8
- 13) _____ is adopted in water treatment, when there is an epidemic in the locality
A) Super chlorination C) Break point chlorination
B) Pre-Chlorination D) Double chlorination


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- 14) Who invented the pH scale?
 A) S.P.L. Sorenson
 B) Henry Moseley
 C) Benjamin franklin
 D) Wilhelm Rontgen
- 15) What is the pH value of very strong acid solution?
 A) Less than 7
 B) Less than 2
 C) Less than 5
 D) Less than zero
- 16) Around _____ of freshwater withdraw go into agriculture
 A) 95% B) 70% C) 50% D) 75%
- 17) The freezing point of water is _____
 A) 374 K B) 400 K C) 273 K D) 250 K
- 18) _____ water does not evaporate
 A) Ground B) Surface C) Frozen D) Fresh
- 19) _____ is the common name of frozen water
 A) Ice B) Honey C) Water D) Sewage
- 20) _____ water is used for fabricating, washing, diluting, cooling etc.
 A) Domestic B) Agriculture C) Industrial D) Marine
- 21) Gases such as _____ and _____ trap heat in the atmosphere
 A) CO₂, NO₂ B) CH₄, NO₂ C) CO₂, O₂ D) CO₂, CH₄
- 22) _____ is any process that improves the quality of water to make it appropriate for a specific end use
 A) pH B) Filtration C) Water treatment D) Coagulation
- 23) To kill bacteria, viruses, pathogens _____ is used
 A) Coagulation B) Sand filtration C) Pre chlorination D) Ultra-violet
- 24) A major chemicals complex was blocked in the _____
 A) 1970 B) 1960 C) 1980 D) 1990
- 25) _____ raise the PH of water to near neutral when injected in to a water system.
 A) Sodium hydroxide C) Methyl acetate
 B) Acetone D) Oxalic acid

Anatrus
 In-charge
 Certificate Course
 Committee
 (A.A. Thakur)



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Certificate Course in 'Introduction to Techniques in Water Purification'

Final Mark list

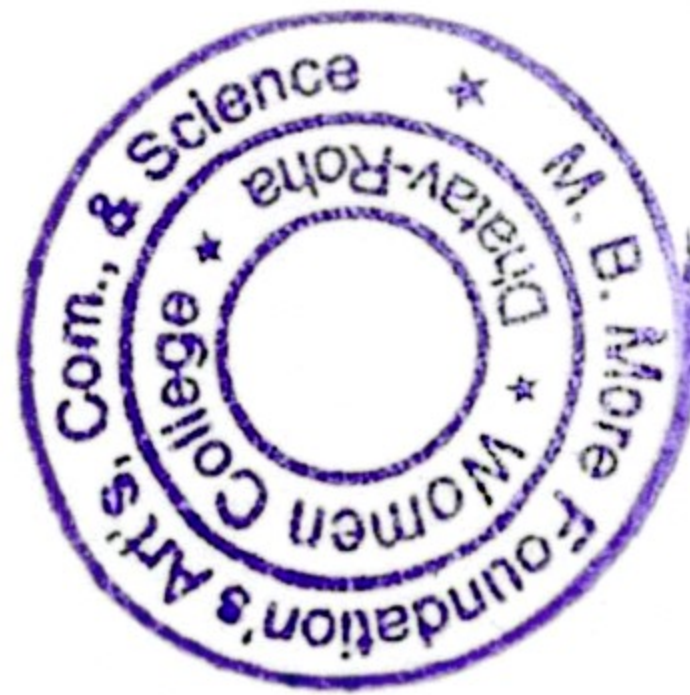
| Sr. No. | Name of the students | Class | Theory (25) | Project work (25) | Total Score (50) |
|---------|------------------------------------|----------|-------------|-------------------|------------------|
| 1 | AMBRUSKAR MAYURI ROHIDAS | T.Y.B.Sc | 16 | 24 | 40 |
| 2 | AMBRUSKAR SIDDHI BHAGOJI PRATIBHA | T.Y.B.Sc | 16 | 24 | 40 |
| 3 | BAMUGADE DIPTI PRAMOD SANGITA | T.Y.B.Sc | 17 | 18 | 35 |
| 4 | BANGI DANIYA KASIM | T.Y.B.Sc | 19 | 18 | 37 |
| 5 | BHAGAT CHAITALI TUKARAM VRUSHALI | T.Y.B.Sc | 16 | 19 | 35 |
| 6 | BHAGAT MAYURI MARUTI TARAMATI | T.Y.B.Sc | 17 | 20 | 37 |
| 7 | BHAGAT RUJVI MUKUND ANJANI | T.Y.B.Sc | 18 | 22 | 40 |
| 8 | BHALEKAR PALAK GANPAT SANJANA | T.Y.B.Sc | 20 | 25 | 45 |
| 9 | BHOIR TEJASHREE TUKARAM TANUJA | T.Y.B.Sc | 19 | 20 | 39 |
| 10 | BIRWADKAR BHAVIKA DATTARAM SAVITA | T.Y.B.Sc | 17 | 24 | 41 |
| 11 | DARJI FIZA MOHSIN RIHANA | T.Y.B.Sc | 15 | 20 | 35 |
| 12 | DESHMUKH JUJILI NARESH RANJANA | T.Y.B.Sc | 16 | 24 | 40 |
| 13 | DESHMUKH KETAKI DEVANAND BHARATI | T.Y.B.Sc | 18 | 19 | 37 |
| 14 | GAIKAR JAYSHRI PANDURANG PRATIKSHA | T.Y.B.Sc | 19 | 23 | 42 |
| 15 | GAIKAR RUCHITA RAMCHANDRA RACHANA | T.Y.B.Sc | 18 | 24 | 42 |
| 16 | GAIKAR SAKSHI GHANASHYAM GARJANA | T.Y.B.Sc | 21 | 22 | 43 |
| 17 | GAIKWAD PRACHI RASHTRAPAL ARUNA | T.Y.B.Sc | 24 | 18 | 42 |
| 18 | INGLE PRERANA SUBHASH | T.Y.B.Sc | 22 | 21 | 43 |
| 19 | JADHAV KETAKI DNYANESHWAR | T.Y.B.Sc | 23 | 19 | 42 |
| 20 | KADAM POOJA SURESH SUCHITA | T.Y.B.Sc | 23 | 20 | 43 |
| 21 | KADAV SHRUSHTI KESHAV KRUNALI | T.Y.B.Sc | 22 | 20 | 42 |
| 22 | KAZI UZMA JAVED SHAMIM | T.Y.B.Sc | 18 | 20 | 38 |
| 23 | KHAIRE NEHA SURESH SUMITA | T.Y.B.Sc | 18 | 23 | 41 |
| 24 | KHAMKAR AFRAH ALTAF FARZANA | T.Y.B.Sc | 18 | 19 | 37 |
| 25 | KUMAVAT KHUSHBU MANGILAL REKHA | T.Y.B.Sc | 19 | 19 | 38 |
| 26 | LOKHANDE AMISHA ASHOK ASIKA | T.Y.B.Sc | 17 | 20 | 37 |
| 27 | MAHADIK DIVYA GANESH GEETANJALI | T.Y.B.Sc | 18 | 20 | 38 |
| 28 | MALUSARE PRAJAKTA CHANDRAKANT | T.Y.B.Sc | 18 | 21 | 39 |
| 29 | MANE DIPALI CHANDRAKANT PUSHPA | T.Y.B.Sc | 21 | 23 | 44 |
| 30 | MANE SANIKA SANTOSH SARITA | T.Y.B.Sc | 15 | 23 | 38 |
| 31 | MANE YAMINI YASHWANT MINA | T.Y.B.Sc | 18 | 21 | 39 |
| 32 | MANHAS SIMRAN KARTARSINGH MANJU | T.Y.B.Sc | 15 | 19 | 34 |
| 33 | MHASKAR KOMAL RAJESH RUPALI | T.Y.B.Sc | 22 | 20 | 42 |

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| | | | | | |
|----|---|----------|----|----|----|
| 34 | MHATRE SAMIKSHA ANANT ASHA | T.Y.B.Sc | 23 | 19 | 42 |
| 35 | MORE DAKASHATA MAHESH AASHA | T.Y.B.Sc | 23 | 19 | 42 |
| 36 | MORE SNEHAL ANANT ANJALI | T.Y.B.Sc | 24 | 19 | 43 |
| 37 | MORE VAISHNAVI SANJAY SANJIVANI | T.Y.B.Sc | 22 | 19 | 41 |
| 38 | NIMBARE SHRUTIKA SACHIN SAYALI | T.Y.B.Sc | 20 | 22 | 42 |
| 39 | PADWAL KARINA BALAVANT VIDYA | T.Y.B.Sc | 22 | 19 | 41 |
| 40 | PADWAL VIJITA LAXMAN LEELA | T.Y.B.Sc | 22 | 20 | 42 |
| 41 | PARDESHI POOJA KIRAN KAVITA | T.Y.B.Sc | 23 | 19 | 42 |
| 42 | PATIL LINA LAHU LATIKA | T.Y.B.Sc | 23 | 19 | 42 |
| 43 | RAJIWALE PRERANA VIJAY | T.Y.B.Sc | 22 | 22 | 44 |
| 44 | RAJIWALE PRIYANKA SHIVAJI SANJANA | T.Y.B.Sc | 18 | 23 | 41 |
| 45 | ROGE ANAM AKBAR SHAGUFTA | T.Y.B.Sc | 21 | 21 | 42 |
| 46 | ROGE TAHURA AZIM GULSHAN | T.Y.B.Sc | 20 | 20 | 40 |
| 47 | SAVARKAR PRASHALI SONU SUHASINI | T.Y.B.Sc | 22 | 21 | 43 |
| 48 | SAWANT RAKHI RAJENDRA RASIKA | T.Y.B.Sc | 20 | 19 | 39 |
| 49 | SHAIKH SHABANA KASIM MUMTAJ | T.Y.B.Sc | 20 | 21 | 41 |
| 50 | SHINDE PRATIKSHA PARESH DEEPALI | T.Y.B.Sc | 17 | 19 | 36 |
| 51 | SHINDE TANVI GANESH KUNDANA | T.Y.B.Sc | 17 | 18 | 35 |
| 52 | SHIRKE PRAJAKTA GANESH GITA | T.Y.B.Sc | 19 | 19 | 38 |
| 53 | THITE MANSI MARUTI MADHURI | T.Y.B.Sc | 19 | 21 | 40 |
| 54 | THITE NISHIGANDHA DATTA VASANTI | T.Y.B.Sc | 20 | 23 | 43 |
| 55 | THITE SAKSHI SANTOSH SANJANA | T.Y.B.Sc | 17 | 22 | 39 |
| 56 | TIKONE VRUSHALI SUDHIR KAMINI | T.Y.B.Sc | 16 | 23 | 39 |
| 57 | ULDE AYESHA SALIM MUIZZA | T.Y.B.Sc | 17 | 18 | 35 |
| 58 | WAGHAVALLE PRANALI PRAKASH PRADNYA | T.Y.B.Sc | 20 | 19 | 39 |
| 59 | WAGHMARE KHUSHI HIRACHANDRA VAISHALI | T.Y.B.Sc | 19 | 20 | 39 |
| 60 | YADAV RASHMI GAJANAN SUGANDHA | T.Y.B.Sc | 17 | 20 | 37 |
| 61 | KASKAR MAHEK SHAKIL KHADIJA | T.Y.B.Sc | 18 | 20 | 38 |

Thakur
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Committee
(A. A. Thakur)



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Certificate

This is to Certify that

Ms. Bhalekar Palak Ganpat.

Class: T.Y.B.Sc. [Chemistry]

participated in the short term certificate course

on

Introduction to Techniques in Water Purification

Conducted by

College certificate course committee

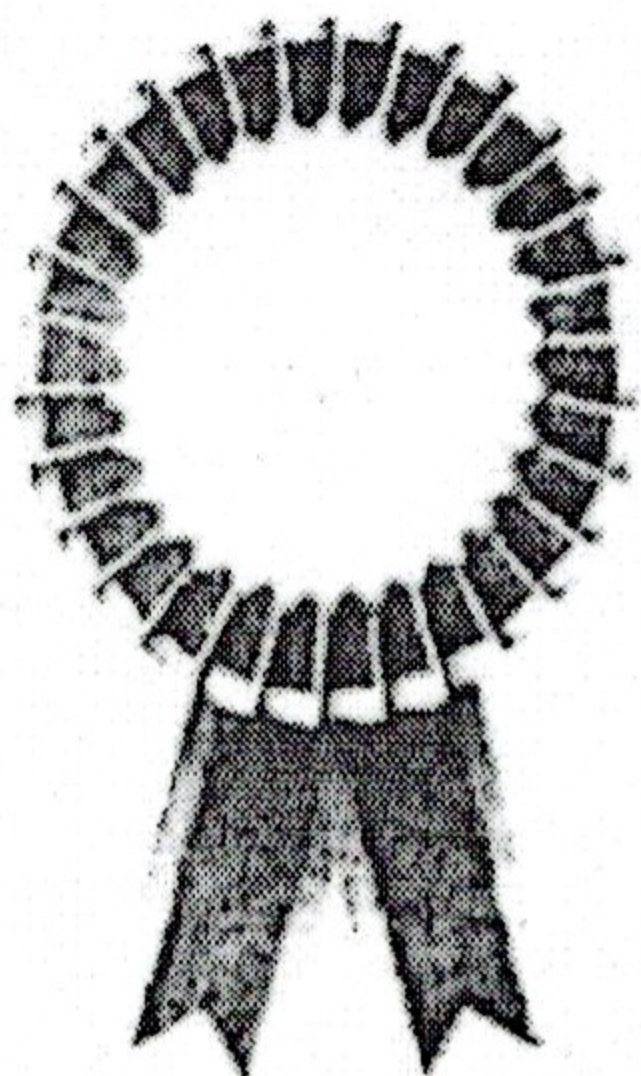
from

28/11/2022 to 02/01/2023 (1 month weeks)

And completed successfully

with 'A+' Grade

Date : 02/01/2023



Analek
Coordinator

[Signature]
Principal
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