

महाराष्ट्र MAHARASHTRA

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1 2 JAN 2022



Memorandum of Understanding

This memorandum is signed between Rayat Shikshan Sanstha's, Abasaheb

Marathe Arts and New Commerce, Science College, Rajapur, Dist-Ratnagiri

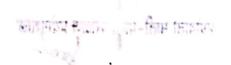
And

growarta Mati Pani Parikshan Prayogshala, Ahmednagar (Soil and Water testing laboratory)

Objectives:

Rayat Shikshan Sanstha's, Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist-Ratnagiri and Agrowarta Mati Pani Parikshan Prayogshala, Ahmednagar (Soil and Water testing laboratory) agreed to conduct the following activities,

(P.T.O.)





व्यस्ताचा प्रकार/अनुष्ठाद क्र [गणि] व्यस्ताचा प्रकार/अनुष्ठाद क्र [गणि] व्यस्ताचा प्रकार/अनुष्ठाद क्र [गणि]
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नोंदवही अ.क.:- २०२३९ १ गुराश्च
सुद्रांक जोताता, लहिसल कार्यालय, नगर मिर्गाया के क्षेत्र के कार्यालय अन वाको महाराज कर्म
a) The Department of Classics Department
a) The Department of Chemistry, Rayat Shikshan Sanstha's, Abasaheb Marathe Arts and New Commerce, Science College, Rajapur offers a 30
hours Short Term Course on 'Soil and Water Amelouis' East of

- a) The Department of Chemistry, Rayat Shikshan Sanstha's, Abasaheb Marathe Arts and New Commerce, Science College, Rajapur offers a 30 hours Short Term Course on 'Soil and Water Analysis'. For this Short Term Course, Ms. Sonali B. More of Agrowarta Mati Pani Parikshan Prayogshala, Ahmednagar will take theory lectures and demonstration of some of the practical through online mode.
- b) To exchange information of research and educational programme.
- c) To undertake a laboratory visit, if possible.
- d)! To counsel problems of local needs regarding soil and water testing.
- e) To organize expert lecture.

Tenure and termination:

This MoU will take effect from the date it is signed by representatives of the two parties. It will remain valid for two years, and may be continued thereafter after suitable review and agreement.

Date: 15/01/2022 Place: Ahmednagar

Witness:

1) Name: Dr. H. N. Akolkar

Address: Ahmednagar

Occupation: Assistant Professor

2) Name: Dr. A. V. Bhave

Address: Rajapur

Occupation: Assistant Professor



I/CPrincipal
A.M.A.&N.C.S.College
Rajapur, Dist.Ratnagiri.



प्रग्रोवाता माती-पाणी परीक्षण प्रयागुशाळ

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Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist-Ratnagiri

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Tal.Rajapur. Dist. Ratnagii.

Department of Chemistry

Certificate Course in "Soil and Water Analysis" (2021-2022)

Enrollment of Students

Sr.No	Roll No.	Name of the student
1	219001	
		Bait Ruchita Ramesh
2	219003	Dhuri Amisha Harishchandra
3	219004	Faras Namira Adamsab
4	219005	Hardikar Audumbar Dnyaneshwar
5	219006	Jadhav Rasika Mahadev
6	219008	Kamble Smruddhi Dilip
7	219009	Khalife Simran Shoukat
8	219010	Kinnake Vaishnavi Dnyaneshwar
9	219013	Naware Chaitanya Mahesh
10	219014	Prabhulkar Anisa Mahamad Asharif
11	219015	Sail Swapnali Prabhakar
12	219016	Shaikh Simran Imtiyaz
13	219017	Solkar Salman Rizwan
14	219019	Tukarul Arati Jayram



Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist - Ratnagiri.

Department of Chemistry

"Certificate Course in Soil and Water Analysis"

2021-22



Abasaheb Marathe Arts and New Commerce, Science College, Rajapur

Department of Chemistry

Short Term Course: Soil and Water Analysis

Board of Studies (2021-22)

Sr. No.	Name of Person	Designation
01	Dr. G.D. Harale (Principal)	Chairman
02	Dr. H. N. Akolkar (Head, Department of Chemistry)	Member
03	Dr. K. A. Sasane (Course coordinator)	Member
04	Ms. Sonali B. More (Expert)	Member
05	Dr. H. N. Akolkar (Chairman, Short Term Course Committee)	Member

Minutes of Meeting

The zoom meeting of Board of Studies for short term course, soil and water analysis was held on 15th January 2022 in Department of Chemistry. The following members were present for the same and above points were discussed.

- Designing of Syllabus for course.
- Course Implementation Period.
- Distribution of theory and practical work.
- Fee structure.

Signatures:

I/c Prin. G. D. Harale

Dr. A. N. Akolkar

Dr. K. A. Sasane

- MARCHIERS Mrs. K.R. Mahanwar

A.M.A. & N.C.S. College

Rajapur, Dist. Ratnagiri.

A & N.C.S.College, Rajapur



Abasaheb Marathe Arts and New Commerce, Science College, Rajapur

Department of Chemistry

Short Term Course: Soil and Water Analysis

Board of Studies (2021-22)

	(2021-22)	
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02	Dr. H. N. Akolkar (Head, Department of Chemistry)	Chairman
03		Member
04	Dr. K. A. Sasane (Course coordinator)	Member
	Ms. Sonali B. More (Expert)	Member
05	Dr. H. N. Akolkar (Chairman, Short Term Course Committee)	Member
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Rajapur, Dist. Ratnagiri

A & M.C.S.College, Rajapur

Rayat Shikshan Sanstha's **Abasaheb Marathe Arts and New Commerce, Science College**Rajapur, Dist – Ratnagiri.

Department of Chemistry

"Certificate Course in Soil and Water Analysis" 2021-22

Aims and Objectives

- 1) To Give the skilful knowledge regarding soil and water analysis
- 2) To provide practical skill of soil testing and water testing
- 3) To ensure the quality of water.
- 4) To spread awareness about importance of safe drinking water.
- 5) To spread the effect of drinking of contaminated water on health among the student and society.
- 6) To check the water quality parameters.
- 7) To determine the fertility of soil.
- 8) To provide an index of nutrient availability in a given soil.
- 9) To predict the probability of obtaining the profitable response to fertilizer application.

Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist – Ratnagiri.

Department of Chemistry

"Certificate Course in Soil and Water Analysis" 2021-22

Duration: 30 Hours
Fees: Rs. 200 per Students

Syllabus: (Theory)

i. Introduction.

iii. Concept of PH.

v. Conductivity of Water.

vii. Determinations of lons-Na, Mg, Ca and Cl.

ix. Alkalinity of Water.

xi. Fertility of Soil, Nitrogen Fixation etc.

Lect. 10 Hours

ii. Hardness of Water.

iv. Concept of POH.

vi. Minerals.

Prac. 20 Hours

viii. BOD, COD and DO.

x. Electrical Cond. of Soil.

xii. Isolated Micro Organism.

Syllabus: (Practical)

- i. Determination of pH of soil by pH Metry.
- ii. To determine electrical conductivity of soil and thereby its total soluble salts.
- iii. Determination of available nitrogen from soil by alkaline permanganate method.
- iv. Determination of calcium carbonate in soil by Rapid titration method.
- v. Determination of pH and electrical conductivity of irrigation water samples.
- vi. Determination of carbonate (CO²-3), bicarbonate (HCO-3) from Irrigation water sample.
- vii. Determination of chloride from Irrigation water sample
- viii. To determine the total hardness of the given water sample.
- ix. To determine of dissolve oxygen of irrigation water by Winkler's Method.
- x. To determine Total Dissolved Solids (TDS) from water samples by evaporation method.



Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Ratnagiri

Department of Chemistry Certificate Course in Soil and Water Analysis (2021-2022)

	Syllabus Distribution			
Sylla	Syllabus: (Theory)			
1. Ms	l. Ms. Sonali B. More (Theory)			
i.	Introduction.			
ii.	Hardness of Water.			
iii.	Concept of PH.			
iv.	Concept of P ^{OH} .			
ν.	Conductivity of Water.	•		
vi.	Minerals.			
2 M	re Kirti R Mahanwar (Theory)	Lect. 05		

2. Mrs. Kirti R. Mahanwar (Theory)

- Determinations of Ions-Na, Mg, Ca and Cl. i.
- BOD, COD and DO. ii.
- Alkalinity of Water. iii.
- Electrical Conductivity of Soil. iv.
- Fertility of Soil, Nitrogen Fixation. ٧.
- Isolated Micro Organism. vi.

Syllabus: Ms. Sonali B. More (Practical)

Lect. 20

- Determination of pH of soil by pH Metry. i.
- To determine electrical conductivity of soil and thereby its total soluble salts. ii.
- Determination of available nitrogen from soil by alkaline permanganate method. iii.
- Determination of calcium carbonate in soil by Rapid titration method. iv.
- Determination of pH and electrical conductivity of irrigation water samples. V.
- Determination of carbonate (CO2-3), bicarbonate (HCO-3) from Irrigation water vi. sample.
- Determination of chloride from Irrigation water sample. vii.
- To determine the total hardness of the given water sample. viii.
- To determine of dissolve oxygen of irrigation water by Winkler's Method. ix.
- To determine Total Dissolved Solids (TDS) from water samples by evaporation X. method.



Rayat Shikshan Sanstha's Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist – Ratnagiri Department of Chemistry

Certificate Course in Soil and Water Analysis 2021-22

NOTICE

Date: 18/01/2022

All the students of T.Y.B.Sc. Chemistry are hereby informed that, the "Certificate Course in Soil and Water Analysis" will starts from Monday, 21 January 2022 at Department of Chemistry. All students must remain present for this course.

HEAD

Department of chemistry

A.M.A. & N.C.S.College, Rajapur



Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist-Ratnagiri

Department of Chemistry

Certificate Course in Soil and Water Analysis

(2021-2022)

Time-Table

Time	Theory/Practical	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.45 am to 9.30	Theory	SBM	SBM	SNB		-	
am							
2.30 pm onwards	Practical				SBM	SBM	KRM

Note: Lectures and Practical's were conducted through online zoom platform.

Theory:

1) Ms. Sonali B. More (SBM)

Practicals:

- 1) Dr. Kirti R. Mahanwar (KRM)
- 2) Miss. Sonali B. More (SBM)

Department of Chemistry



Abasaheb Marathe Arts and New Commerce, Science College, Rajapur, Dist-Ratnagiri

Department of Chemistry

Certificate Course in Soil and Water Analysis Attendance Sheet 2021-22

Sr. No.	Roll No.	Name of the student	Sign	Sigh	Sigh	Sigh	Sigh
1	2063042	Bait Ruchita Ramesh	Regart	Als	Ab	Pzul	- Special
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		Khalife Simran Shoukat	Abalifel	Schalle	Schalite	Shall	Spall
7	2063048	Kinnake Vaishnavi D	Valshran	AL	AL	wighmen	long span
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10	2063051	Prabhulkar Anisa Mahamad	Bruhul kan			AL	AL
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Department of chemistry

A.M.A. & N.C.S.College, Rajapur



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Department of chemistry A.M.A. & N.C.S.College, Rajapur



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Department of chemistry A.M.A. & N.C.S.College, Rajapur