

Khandala Vibhag Shikshan Samiti's

## Sushila Shankarrao Gadhave Mahavidyalaya, Khandala

### Supportive Documents For Certificate Course

1. Notice regarding the introduction date of the course.
2. BOS resolution.
3. Syllabus of the course.
4. Course objectives & outcomes.
5. List of enrolled students.
6. Time table.
7. Attendance Sheets.
8. Result of the course.
9. One sample certificate of the pass student.



**Khandala Vibhag Shikshan Samits**

**Sushila Shankarrao Gadhave Mahavidyalaya, Khandala**

**2019-2020**

**Name Of Department - Chemistry**  
**Name Of Course - Soil & Water Testing**  
**Duration - 3 Months**  
**Assesment Procedure - Theory Paper – 50 Marks**  
**Practical - 50 Marks**



**Course Co-ordinator**  
**(Miss.Surve S.S.)**

**Chairman**

**(Dr. )**



**Principal**





Khandala Vibhag Shikshan Samiti's

**Sushila Shankarrao Gadhave Mahavidyalaya, Khandala**

**Department Of Chemistry**

**Notice:-**

All the students of B.Sc.III are hereby informed that, their regular lectures for the Course "Soil And Water Analysis" will be started from 25-11-2019

In B.Sc. III classroom.

All enrolled students must be present for the same in time Time of lecture is 9:30 am To 10:30 am Time of practical is 9 am To 12 pm (on recommended day)

**Head**

**Department of Chemistry**

19-20  
mward



Khandala Vibhag Shikshan samitis

Sushila Shankarrao Gadhave Mahavidyalaya, Khandala

Department of Chemistry

Certificate course : - Soil & Water Analysis

Board of Studies

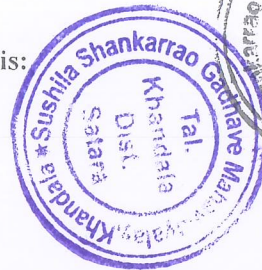
Sr.No	Name of Member	College	Designation
1	Dr.Bamane S.R.	Principal Sushila Shankarrao Gadhave mahavidyalaya Khandala	Chairman
2	Prof.kamble U.B.	Asst. Prof.Kisanveer Mahavidyalaya wai	Member
3	Dr.Bhoite P.H.	Asst. Prof.Kisanveer Mahavidyalaya wai	Member
4	Prof.Surve S.S.	H.O.D. Sushila Shankarrao Gadhave mahavidyalaya Khandala	Member
5	Prof.Kalokhe A.P.	Asst. Prof.Sushila Shankarrao Gadhave mahavidyalaya Khandala	Member

# Syllabus

Certificate course in Soil and Water analysis:

Max. Marks : 50

## Part I: Soil Analysis



### Unit I: Introduction to Soil Science

Definition of Soil as a natural body, Soil Components inorganic and organic solids, Types of Soils & Basic Concepts.

Properties of Soil:

Introduction to properties of Soil:

#### A) Physical Properties :-

Soil Texture and Structure, Temperature, Colour, Properties of Soil Mixture Particle Density.

#### B) Chemical Properties :-

Chemistry of Clays, Ionic Exchange, Acidity, Alkalinity, pH, Salinity, Reactions in Liming and Acidification.

#### C) Biological Properties :-

Soil Organic Matter, C:N Relationships, N-Transformation, Soil Organisms, Sulfur Transformation.

### Books Recommended :

1. Soils and soil fertility, Troch, F.R. And Thompson, L.M. Oxford Press.
2. Fundamentals of soil science, foth, H.D. Wiley Books.
3. Soil Science and Management, Plaster, Edward J., Delmar Publishers.
4. Principles of Soil Chemistry (2Wed.) Marcel Dekker Inc., New York.

### Unit II: Soil Testing & Analysis

Unit I: Sample Collection and Processing

Purpose of Soil testing and analysis, selection of field, Method of Soil Sample collection Methods of soil sample processing, precautions during soil collection & processing, Preservation labeling and Storage of soil samples

## Practicals

1. Visit to Soil Testing Laboratory & Report writing.
2. Visit to Farmers Fields for Collection of Soil Samples, identification of nutrient deficiency Symptoms in Crop.
3. Preparation of Various Chemical reagents required for soil testing.
4. Processing of Soil Sampling for analysis
5. Determination of PH of soil sample using PH meter
6. Determination of Electrical Conductivity of Soil Sample using Electrical Conductivity meter.
7. Determination of Organic Carbon by wet Oxidation method.
8. Determination of available Nitrogen from Soil Sample.
9. Determination of available phosphorus from soil sample.

### Reference Books:

1. Introduction To soil laboratory manual: j.j. harsett stipes
2. Introduction To soil science laboratory manual: palmer & troch

## Part II: Water Analysis

### Unit III: Introduction to Water analysis .

Types of Water, Water pollutants, role of water testing for environment, Uses of water analysis.

### Unit IV: Introduction to Water analysis, Types of Water, Water pollutants, role of water testing for environment, Uses of water analysis.

Temp, Turbidity, Acidity, Alkalinity, Biological oxygen demand (BOD), Conductivity and specific conductance, Chemical oxygen demand (COD), Residual Chlorine, Dissolved oxygen, Fluoride, Hardness, Total nitrogen, pH, Phosphorus, Total solids (TS), Total dissolved solids (TDS), Total suspended solids (TSS), Sodium, Potassium.

### Practicals

- 1) To determine hardness of water.
- 2) To determine  $P^H$  of given water sample.
- 3) To determine alkalinity of water.
- 4) To determine TDS of given sample of water.

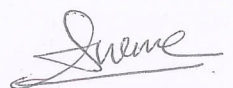
### Reference Book:

Manual for analysis of water

This proposal is placed before IQAC of Sushila Shankarrao Gadhave Mahavidyalaya, Khandala for syllabus approval.

IQAC

S.R. Majgaonkar

  
course coordinator

S.S. Surve

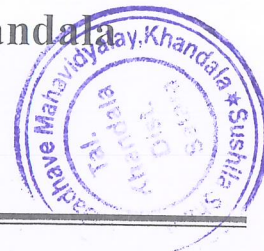
  
Principal

Secretary

K.V.S.S. Khandala



**Khanadala Vibhag Shikshan Samiti's**  
**Sushila Shankarrao Gadhave Mahavidyalaya, Khandala**  
**Department Of Chemistry**  
**Certificate course in Soil and Water Analysis**



Sushila Shankarrao Gadhave Mahavidyalaya, Khandala and IQAC department in its meeting decided to introduce self finance certificate course in **Soil and Water Analysis** for academic year 2018-19. This course will continue for next three years.

**Objectives of the Course:-**

1. To develop basic understanding regarding soil testing in the students.
2. To introduce them with macro and micro nutrients for soil.
3. To enhance their skills about water analysis.
4. To propagate the importance of the course for farmers.

**Instructional Design:-**

This course includes theory classes, field Visit.

**Course Structure and Examination Scheme:-**

Course No.	Course Name	Contact Classes (Hour)	Laboratory Experiment (Hour)	Total Marks
1	Soil and Water analysis	10	20	50

**Quality Assurance Mechanism:**

The quality of the course will be ensured through continuous evaluation of feedback from students and course coordinator by IQAC department of the College.



# Sushila Shakarrao Gadhave Mahavidyalaya Khandala

Department of Chemistry

Short term Course

Certificate Course in Soil & Water Analysis

Assesment & Evaluation

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**Theory** (50)

Quesestion paper including 50 marks of objective question.

Fill in the Blanks

**Oral Test** (10)

**Assignments** (20)

**Project** (20)

**Grades:**

Percentage	Grade
Below 40%	F (Fail)
40-49 %	P (Pass)
50-59 %	C (Average)
60 - 69 %	B (Good )
70 – 79 %	A (Very Good )
80 – 89 %	A+ ( Excellent )
90 – 100 %	O ( Outstanding)







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# Sushila Shankarrao Gadhave Mahavidyalaya, Khandala

## Student List – 2019-20

Course name - Soil & Water Analysis

Roll No.	Student Name
1	SHINDE POOJA NARAYAN
2	DHAYGUDE ASHWINI VIJAY
3	DHAYGUDE RESHMA SOPAN
4	RAUT SHUBHADA HANMANT
5	KIRVE ASMITA CHANDRAKANT
6	DHAMAL DIVYA RAMCHANDRA
7	HIRVE POOJA RAMCHANDRA
8	BHOSALE ASHWINI LAXMAN
9	BHOSALE KOMAL PRAKASH
10	CHAVAN PRAJAKTA SANTOSH
11	KASURDE SNEHA RAMESH
12	SHINDE ADITYA TANAJI
13	SHINDE ADITYA ASHOK
15	TAMBOLI ASHRAFA ALIM
16	DHAIGUDE KIRAN KESHAV
17	KHANDAGALE ADITI LAXMAN
18	KHANDAGALE NEHA SADASHIV
20	KHUNTE PRATIKSHA HIRAJI
21	RAMCHANDRA
24	DHAYGUDE MANALI BHAGWAN
26	JADHAV CHARUSHILA SANJAY
27	SHIRKE DIPALI APPASO
28	VISHWANATH
29	DHAYGUDE SAYALI HANMANT
31	DHAYGUDE TRUPTI BALASO
35	HANMANT
38	SAWANT SHRADHA BABAN
41	SHAIKH ASMA CHAND
48	MANE PRIYANKA DILIP
51	MADKAR RUSHIKESH SUBHASH
52	MOHITE MANTHAN RAJENDRA
54	BHOSALE NIKHIL DILIP
55	KUDALE JAYADEV PRAKASH
56	DHAYGUDE SUSHANT BHARAT
58	JADHAV PRATIKSHA DASHRATH
61	MAHANWAR VIKRAM BALASO
62	JAGTAP ANKITA DIGAMBAR



63	DHAMAL SHRUSHTI SANTOSH
64	NIKAM KAJAL RAJENDRA
65	KOLHE DADA RAJENDRA
66	RASKAR AKASH ARJUN
67	PISAL TUSHAR LAXMAN
68	PAWAR OMKAR SUDAM
69	THOMBARE SHANKAR GANAPAT
70	CHAVAN AKASH SANJAY

**Khandala Vibhag Shikshan Samit's**  
**Sushila Shankarrao Gadhave Mahavidyalaya, Khandala**  
**Time Table (Soil & Water Analysis)**

**Year 2019-20**



DATES	TEACHER NAME	LECTURE	PRACTICAL
25/11/2019	PROF . MiSS .More S.S	8.30 -9.30 am	
26/11/2019	PROF . MiSS . Nevase. K.A	8.30 -9.30 am	
27/11/2019	PROF . MiSS.Surve S.S		8.30 -11.30 am
28/11/2019	PROF . MiSS. Kalokhe A.P	8.30 -9.30 am	
29/11/2019	PROF . MiSS .Khandagle K.H	8.30 -9.30 am	
30/11/2019	PROF . MiSS . Dhayagude S.C		8.30 -11.30 am
02/12/2019	PROF . MiSS. Kalokhe A.P	8.30 -9.30 am	
03/12/2019	PROF . MiSS. Kalokhe A.P	8.30 -9.30 am	
04/12/2019	PROF . MiSS .More S.S		8.30 -11.30 am
05/12/2019	PROF . MiSS. Kalokhe A.P	8.30 -9.30 am	
06/12/2019	PROF . MiSS. Kalokhe A.P	8.30 -9.30 am	
07/12/2019	PROF . MiSS . Nevase. K.A		8.30 -11.30 am
09/12/2019	PROF . MiSS . Dhayagude S.C	8.30 -9.30 am	
10/12/2019	PROF . MiSS.Surve S.S	8.30 -9.30 am	
11/12/2019	PROF . MiSS .Khandagle K.H		8.30 -11.30 am

*Shree*  
Co-ordinator

# Sushila Shankarrao Gadhave Mahavidyalaya, Khandala

Khandala Vibhag Shikshan Samitis

Attendance Sheet 2019-20

Course - Soil & Water Analysis

Roll No.	Student Name	25/11/19	26/11/19	27/11/19	28/11/19	29/11/19	30/11/19	02/12/19	03/12/19	04/12/19	05/12/19	06/12/19	07/12/19	08/12/19	09/12/19	10/12/19	11/12/19
1	SHINDE POOJA NARAYAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	DHAYGUDE ASHWINI VIJAY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	DHAYGUDE RESHMA SOPAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	RAUT SHUBHADA HANMANT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	KIRVE ASMITA CHANDRAKANT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	DHAMAL DIVYA RAMCHANDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	HIRVE POOJA RAMCHANDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	BHOSALE ASHWINI LAXMAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	BHOSALE KOMAL PRAKASH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	CHAVAN PRAJAKTA SANTOSH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	KASURDE SNEHA RAMESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	SHINDE ADITYA TANAJI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	SHINDE ADITYA ASHOK	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	TAMBOLI ASHRAFA ALIM	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	DHAGUDE KIRAN KESHAV	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	KHANDAGALE ADITI LAXMAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	KHANDAGALE NEHA SADASHIV	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	KHUNTE PRAKISHA HIRAJI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	SHIVTARE SWATI RAMCHANDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
24	DHAYGUDE MANALI BHAGWAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	JADHAV CHARUSHILA SANJAY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	SHIRKE DIPALI APPASO	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	CHAUGULE DIPALI VISHWANATH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	DHAYGUDE SAYALI HANMANT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	DHAYGUDE TRUPTI BALASO	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
35	BHOSALE MAHENDRA HANMANT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
38	SAWANT SHRADHA BABAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
41	SHAIKH ASMA CHAND	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
48	MANE PRIYANKA DILIP	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
51	MADKAR RUSHIKESH SUBHASH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
52	MOHITE MANTHAN RAJENDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
54	BHOSALE NIKHIL DILIP	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
55	KUDALE JAYADEV PRAKASH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
56	DHAYGUDE SUSHANT BHARAT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P



58	JADHAV PRAKISHA DASHRATH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	1
61	MAHANWAR VIKRAM BALASO	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
62	JAGTAP ANKITA DIGAMBAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
63	DHAWAL SHRUSHTI SANTOSH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
64	NIKAM KAJAL RAJENDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
65	KOLHE DADA RAJENDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
66	RASKAR AKASH ARJUN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
67	PISAL TUSHAR LAXMAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
68	PAWAR OMKAR SUDAM	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
69	THOMBARE SHANKAR GANAPAT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
70	CHAVAN AKASH SANJAY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	





# SHIVAJI UNIVERSITY, KOLHAPUR

Paper Wise Attendance Sheet and Junior Supervisor Report For – 2019-20

Course name - Soil & Water Analysis

Center Name –Sushila Shankarrao Gadhave Mahavidyalaya, Khandala

Date & time \_

Total students -45

Roll No.	Student Name	Marks	Percentage	Grade
1	SHINDE POOJA NARAYAN	84	84	A+
2	DHAYGUDE ASHWINI VIJAY	88	88	A+
3	DHAYGUDE RESHMA SOPAN	84	84	A+
4	RAUT SHUBHADA HANMANT	92	92	O
5	KIRVE ASMITA CHANDRAKANT	88	88	A+
6	DHAMAL DIVYA RAMCHANDRA	88	88	A+
7	HIRVE POOJA RAMCHANDRA	80	80	A+
8	BHOSALE ASHWINI LAXMAN	92	92	O
9	BHOSALE KOMAL PRAKASH	76	76	A
10	CHAVAN PRAJAKTA SANTOSH	92	92	A
11	KASURDE SNEHA RAMESH	72	72	A
12	SHINDE ADITYA TANAJI	84	84	A+
13	SHINDE ADITYA ASHOK	92	92	O
15	TAMBOLI ASHRAFA ALIM	100	100	O
16	DHAIGUDE KIRAN KESHAV	100	100	O
17	KHANDAGALE ADITI LAXMAN	88	88	A+
18	KHANDAGALE NEHA SADASHIV	80	80	A+
20	KHUNTE PRATIKSHA HIRAJI	100	100	O
21	SHIVTARE SWATI RAMCHANDRA	92	92	O
24	DHAYGUDE MANALI BHAGWAN	80	80	A+
26	JADHAV CHARUSHILA SANJAY	96	96	O
27	SHIRKE DIPALI APPASO	92	92	O
28	CHAUGULE DIPALI VISHWANATH	100	100	O
29	DHAYGUDE SAYALI HANMANT	84	84	A+
31	DHAYGUDE TRUPTI BALASO	92	92	O
35	BHOSALE MAHENDRA HANMANT	92	92	O
38	SAWANT SHRADHA BABAN	92	92	O
41	SHAIKH ASMA CHAND	64	64	B
48	MANE PRIYANKA DILIP	84	84	A+
51	MADKAR RUSHIKESH SUBHASH	88	88	A+
52	MOHITE MANTHAN RAJENDRA	92	92	O
54	BHOSALE NIKHIL DILIP	100	100	O
55	KUDALE JAYADEV PRAKASH	100	100	O
56	DHAYGUDE SUSHANT BHARAT	80	80	A+
58	JADHAV PRATIKSHA DASHRATH	80	80	A+
61	MAHANWAR VIKRAM BALASO	80	80	A+
62	JAGTAP ANKITA DIGAMBAR	100	100	O
63	DHAMAL SHRUSHTI SANTOSH	76	76	A
64	NIKAM KAJAL RAJENDRA	84	84	A+
65	KOLHE DADA RAJENDRA	92	92	O

*Shree*

co-ordinator



66	RASKAR AKASH ARJUN	96	96	0
67	PISAL TUSHAR LAXMAN	100	100	0
68	PAWAR OMKAR SUDAM	92	92	0
69	THOMBARE SHANKAR GANAPAT	88	88	AT
70	CHAVAN AKASH SANJAY	96	96	0

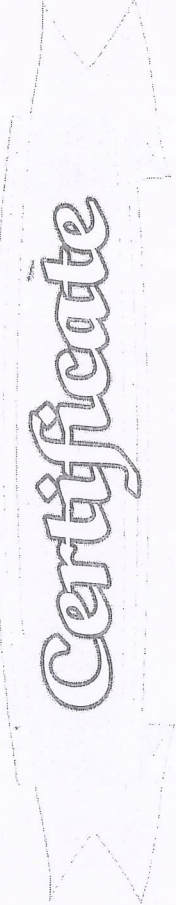
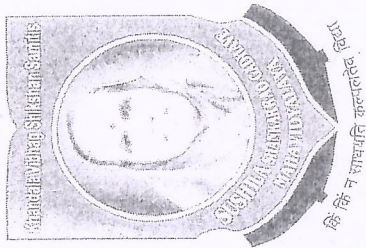
*Shri*  
co-ordinator



Khandala Vibhag Shikshan Samitee's

# SUSHILA SHANKARRAO GADHAVE MAHAVIDYALAYA, KHANDALA

( Arts, Commerce, Science & BCA )  
Tal. Khandala, Dist. Satara, Pin - 412802



This is to certify that Shri / Smt. ....Shinde.....Aditya Tanaji.....  
has Participated / Completed in .....Soil...and...water Testing.....

During the Academic Year 20219 - 2020

*[Signature]*

Co - ordinator

*[Signature]*

Principal