

Certificate Course : Soil & Water Analysis

**Year 2018-2019**

To be submitted to the

**AWAHAR ARTS SCIENCE & COMMERCE COLLEGE  
ANDUR**

*Tq. Tuljapur Dist. Osmanabad*

Submitted by

Course Co-ordinator

Dr. D. S. Suryawanshi

Professor & Head Department of Botany

Jawahar Arts Science & Commerce College Andur

Tq. Tuljapur Dist. Osmanabad

**December 2018**



दुहिते विदिते ज्ञाने !

Shikshan Prasarak Mandal's Anadur

**JAWAHAR ART'S, SCIENCE & COMMERCE COLLEGE, ANADUR**

Tq. Tuljapur, Dist. Osmanabad-413 603

**NAAC GRADE - B++(CUPA 2.81)**

**President :- Shri. B.F.Kasture**

**Secretary :- Shri. S.N. Alure Guruji**

**I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9960242857)**

**☎ :- (02471) 246037, 246737**

30/06/2018

## Notice

All the faculty members of Botany Department are hereby informed that a meeting of our department will be held on day 30 / 06 / 2018 under the chairmanship of our head Dr. D. S. Suryawanshi to discuss the following agenda. So everyone should attend on time.

### **Agenda for meeting:**

1. To read and confirm the Proceeding of last meeting.
2. To read and confirm the certificate course.
3. To discuss and design the stricter of certificate course.
4. To prepare and frame the syllabus of certificate course.
5. To formulate the BOS.
6. To prepare the Time-Table of certificate course.
7. To conduct other activities regarding the course.
8. Timely topics with the permission of chairperson.

*M. B. Jadhav*  
**PRINCIPAL**  
Jawahar Arts, Science & Commerce  
College, Anadur,  
Tal. Tuljapur, Dist. Osmanabad.

*Suryawanshi*  
**Head Department of Botany**  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

**Head Department of Botany**  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad



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**I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9980242667)**


**☎ :- (02471) 246037, 246737**


### Proceeding of Botany Departmental Meeting

Date: 09/08/2018

Today 09 / 08 / 2018 a meeting was held in department of chemistry under the chairperson Dr. D. S. Suryawanshi (HOD). In this meeting discussion made on how the conduct the certificate course in Soil & Water Analysis. All faculties are unanimously agreed to run this certificate course for all UG students. Discussion was successful regarding to construct the syllabus, timetable, the nature of Question paper and the said course admission form. All faculties assured each other to give healthy contribution for running this course and all other efforts needed. Finally all faculties are firmly decided to construct the syllabus, timetable, sample question paper and admission form and to convey to Hon. Principal for further approval from College Development committee.

- DSS- Dr. D. S. Suryawanshi
- KDA- Mrs .D. A. Kalshetti
- GRV-Shri. R. V. Ghodke
- CSG- Shri S. G. Chavan

  
head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
Principal  
**PRINCIPAL**  
Jawahar Arts, Science & Commerce  
College, Anadur,  
Tal. Tuljapur, Dist. Osmanabad.



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**I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9900242667)**

**☎ :- (02471) 246037, 246737**

Date: 18 / 08 / 2018

To,

Principal,

JASC College, Anadur.

Tq. Tuljapur, Dist. Osmanabad.

Sub: To get the permission to Botany department to conduct the certificate course in Soil science for academic year 2018-2019. Dear Sir, With reference to above cited subject I am kindly informing you that a departmental meeting of Botany was held on date 18 / 08 / 2018, in this meeting all faculty are unanimously decided to conduct a certificate course in "Soil & Water Analysis" during this academic year 2018-2019.

In this meeting we all faculty also make a action plan to run this certificate course with all necessary formalities. So we all the chemistry faculty are requesting to you give us approval for said courses.

Attached:

- ✓ Departmental proceeding
- ✓ Time-Table
- ✓ Syllabus
- ✓ Question Paper Pattern
- ✓ Admission form

**Mrs .D. A. Kalshetti**

**Shri. R. V. Ghodke**

**Shri. S.G. Chavan**

Head *Suryawanshi*

Head Department of Botany  
Dr. D. S. Suryawanshi  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

*M.B. Jadhav*  
Principal

**PRINCIPAL**  
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**I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9960242667)**

**☎ :- (02471) 246037, 246737**

Date: 27/08/2018

To,

The Head,

Department of Botany

Jawahar ASC College, Anadur,


Tq. Tuljapur, Dist. Osmanabad.

**Subject: Approval to conduct the certified course for students of science.**

As per the decision taken in College Development Committee, you are directed to conduct the Certificate course in Soil & Water Analysis in your department for the students of our college. The course should be of 30 hours and be conducted in the academic year 2018-2019.

Convey your timetable of the said course to the timetable committee so as to avoid any overlapping of lecturers.

  
Head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
Principal  
Jawahar Arts, Science & Commerce  
College, Anadur,  
Tal. Tuljapur, Dist. Osmanabad.



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**Secretary :- Shri. S.N. Alure Guruji**

**I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9860242867)**

**☎ :- (02471) 246037, 246737**

**Date :- 25/08/2018**

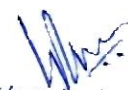
### Notice

All the students of science faculty are hereby informed that the Department of Botany is going to conduct a value added / skill based certificate course on "Soil & Water Analysis" during this academic year 2018-2019 from 01 / 09 / 2018 to 29 / 09 / 2018(30 hours).

The interested students may enroll their name with Mr. Namdev Kale at department of Botany before 29 / 08 / 2018

  
Co-coordinator

  
Head  
head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
Principal  
**PRINCIPAL**  
Jawahar Arts, Science & Commerce  
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Tal. Tuljapur, Dist. Osmanabad.



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President :- Shri. B.F.Kasture

Secretary :- Shri. S.N. Alure Guruji

I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9990242667)

☎ :- (02471) 246037, 246737

Jawahar Arts, Science & Commerce College, Anadur

Department of Botany

Certificate Course on Soil & Water Analysis

Student registration form ( 2018-2019 )

Name of Student: Ms. Langade Shradha Shrinanand,

Class and Roll No: B-sc.II - AB-09

Contact No: \_\_\_\_\_

Email address: \_\_\_\_\_

Corresponding Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Shradha Langade  
Signature of Student

Surya S.  
Co-coordinator

Surya S.  
Head of Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

Shrinanand  
Principal  
Jawahar Arts, Science & Commerce  
College, Anadur,  
Tal. Tuljapur, Dist. Osmanabad.



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☎ :- (02471) 246037, 246737

Department of Botany

Jawahar Arts, Science and Commerce College, Andur

Add on Course on Soil & Water Analysis

Enrollment List of Students 2018-2019


Sr. No	Roll Number	Name of Student	Class
1	AB-01	Ku. Langade Shradha Shivanand	B. Sc. II
2	AB-02	Ku. Loke Mauli Sanjay	B. Sc. II
3	AB-03	Ku. Lokhande Pooja Nasivant	B. Sc. II
4	AB-04	Ku. LokhandeStuti Nasivant	B. Sc. II
5	AB-05	Ku. Madje Sulochana Pandit	B. Sc. II
6	AB-06	Maitri Satyjeet Shivanand	B. Sc. II
7	AB-07	Manale Laxman Angad	B. Sc. II
8	AB-08	Ku. Mashalkar Chaitrali Subhash	B. Sc. II
9	AB-09	Ku. Matolkar Anjali Sadasiv	B. Sc. II
10	AB-10	Matolkar Mahesh Mahadev	B. Sc. II
11	AB-11	Mendapure Sweta Vijay	B. Sc. II
12	AB-12	Mkashe Omkar Kondiba	B. Sc. II
13	AB-13	MoreAkash Ram	B. Sc. II
14	AB-14	Ku. More Mayuri Vittal	B. Sc. II
15	AB-15	Ku. Mule Vibhavari Narsing	B. Sc. II
16	AB-16	Ku. Murte Sugal Siddheshwer	B. Sc. II
17	AB-17	Ku. Navgire Sushama Subhash	B. Sc. II
18	AB-18	Palampale Balaji Shivaji	B. Sc. II
19	AB-19	Patil Rakesh Rajshekar	B. Sc. II
20	AB-20	Pawar Rahul Subhash	B. Sc. II
21	AB-21	Rathod Akash Kant	B. Sc. II
22	AB-22	Rathod Avinash Anil	B. Sc. II
23	AB-23	Rathod Gorakh Shankar	B. Sc. II
24	AB-24	Rathod Mahesh Babu	B. Sc. II
25	AB-25	Sadafule Makarand Manohar	B. Sc. II
26	AB-26	Ku. Sagare Dipali Ramkrishana	B. Sc. II
27	AB-27	Sakhare Ganesh Nilappa	B. Sc. II
28	AB-28	Ku. Sakhare Swapna Shivraj	B. Sc. II
29	AB-29	Sarukh Deepak Hanumant	B. Sc. II

*Singh*  
Head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

*Jadhav*  
Principal  
Jawahar Arts, Science & Commerce College  
Anadur, Tal. Tuljapur, Dist. Osmanabad.



30	AB-30	Ku. Savant Swati Ram	B. Sc. II
31	AB-31	Shaikh Fatru Mahamand	B. Sc. II
32	AB-32	Shaikh Haidar Rabilal	B. Sc. II
33	AB-33	Shetti Prasad Vishwanath	B. Sc. II
34	AB-34	Ku. Shinde Geetashri Dnyanand	B. Sc. II
35	AB-35	Ku. Shinde Rajeshri Danaji	B. Sc. II

  
Head Department of Estany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
Principal  
Jawahar Arts, Science & Commerce College  
Anadur, Tal. Tuljapur, Dist. Osmanabad.



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☎ :- (02471) 246037, 246737

### Syllabus of Certificate Course in "Soil & Water Analysis"

#### 1. Analysis of Soil and Water

Introduction, Soil type & Soil profile, Erosion of soil, Conservation of soil Physical & Chemical properties of soil,

#### 2. Water Pollution:

Introduction water pollution & its definition, Sources of water pollution, Classification of water pollutants and Water Pollutants areas


#### 3. Soil Pollution.

Chemistry of Soil, Source of soil pollution, Agriculture pollution Agriculture chemicals

#### 4. Waste and Soil Treatment:

Characteristic of waste water, Treatment of water pollution, Pre primary treatment, Primary treatment, Secondary treatment. Tertiary treatment & Soil treatment

  
Head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
Head Department of Commerce  
Jawahar Arts, Science & Commerce  
College, Anadur,  
Tal. Tuljapur, Dist. Osmanabad



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Secretary :- Shri. S.N. Alure Guruji

I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9990242697)

☎ :- (02471) 246037, 246737

Certificate Course in Soil & Water Analysis

Practical ( 15 Hrs )

Sr. No.	Name of Exprimment
1	To Determination of PH, Moisture & Humidity
2	To Detetmine nutrient content (NPK )of Soil
3	To Determine Micronutrient Soil
4	To Determine Salinity of given soil sample
5	To Determine Organic carbon of soil
6	To Determine total Alkalinity of water
7	To Determine the hardness of water sample
8	To Determine Ph and conductance of waste water
9	To Determine Acidity of water
10	To Determine TS, TSS, TDS of water
11	To Determine salinity of the given water sample
12	To Determine Dissolve oxygen of waste water
13	To Determine Chemical oxygen demand of waste water

Co-ordinator

(Dr. D. S. Suryawanshi )

Head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

PRINCIPAL  
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**☎ :- (02471) 246037, 246737**


This Course is included Theory classes, field visit assignment, Practicals  
Course structure & Examination Scheme

Course name	Contact classes ( hours )	Laboratory experiment ( hours )	Internal Marks	External Marks		Total Marks
				Theory	Practical	
Soil & Water Analysis	15	15	20	50	50	100

  
Co-ordinator

(Dr. D. S. Suryawanshi)

  
Head of Department of Botany  
Jawahar College Anadur,  
Tal. Tuljapur, Dist. Osmanabad

  
Principal  
PRINCIPAL  
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**☎ :- (02471) 246037, 246737**

Ref.No.JASC/Chem/Syll/BOS/2018-2019/

Date: 21/08/2018

To,

1) Dr. D. S. S. Suryawanshi

2) Dr. Dr. S. R. Biradar

Ad-hoc Board in Botany

Ad-hoc Board in Botany

JASC College, Anadur,

BSS College, Makani

Tq. Tuljapur, Dist. Osmanabad

Tq. Lohara, Dist. Osmanabad.

Mob: 9511770582

Mob: 9284313450

3) Mrs. D. A. Kalshetti

4) Shri. R. V. Ghodke

Ad-hoc Board in Botany

Ad-hoc Board in Botany

JASC College, Anadur,

ASC. College, Anadur

Tq. Tuljapur, Dist. Osmanabad.

Tq. Tuljapur, Dist. Osmanabad

Mob: 8237171931

Mob: 8600463070


**Subject: Constitution of Ad-hoc Board in Botany (Certificate Courses-Soil & Water Analysis)**

Sir/Madam,

I am to inform your that the Hon'ble Principal is pleased to nominate you as a Member/Chairman on the Ad-hoc Board in Botany for this previous year 2018-2019 as per provision statute-159 of the university act. While requesting you to accept this invitation to work on the Ad-hoc Board. I do realize your busy moments in your own field. Yet in view of your expertise in the subject. I shall be thankful if you accept the membership of the Ad-hoc Board for enriching the academic standards of the university through your valuable contribution.

Your appointment shall be governed by and subject to the provisions of the Maharashtra Public University Act, 2016 as amended from time to time. Kindly communicate your acceptance at the earliest.

  
Head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
PRINCIPAL  
Jawahar Arts, Science & Commerce  
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Department of Botany

Jawahar Arts, Science and Commerce College, Anadur

Add on Course on Soil & Water Analysis

Theory Time Table - 2018-2019

Lecture	Time	Monday	Tuesday	Wednesday	Thursday	Friday
I	03.00 to 04.00	DSS	KDA	GRV	CSG	KDA
II	04.00 to 05.00	DSS	KDA	GRV	CSG	GRV
III	05.00 to 06.00	DSS	KDA	GRV	CSG	CSG

Practical Time Table - 2018-2019

Lecture	Time	Monday	Tuesday	Wednesday	Thursday	Friday
I	03.00 to 04.30	DSS	PAM	VGM	LLM	DNG
II	04.30 to 06.00	DSS	KDA	GRV	CSG	KDA

List of Faculty Contributing for this Course

- DSS- Dr. D. S. Suryawanshi
- KDA- Mrs .D. A. Kalsbetti
- GRV-Shri. R. V. Ghodke

CSG- Shri S. G. Chavan

*Suryawanshi*  
head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

*M.B. Jadhav*  
Principal  
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**☎ :- (02471) 246037, 246737**

Date: / /

Date: 14/08/16

## BOS Meeting Proceeding

As per requested all BOS member are gathered together to discuss regarding the syllabus of certificate course in Soil & Water Analysis going to conduct by department of Botany during the academic year 2018-2019. In this meeting under the chairperson of head of department Dr. D.S.Suryawanshi, discussion made on designing syllabus as well as how to implement the said course smoothly and fruitful. All members put their view and finally decided the syllabus, duration of one month regular with day to day activities. After vote of thanks expressed by Mrs. D.A. Kalshetti the said meeting is over.

  
Dr. S. R. Biradar

  
Mrs. D. A. Kalshetti

  
Shri. R. V. Ghodke

  
Head

Dr. D. S. Suryawanshi

Head Department of Botany  
Jawahar College Andur,  
Tal. Tuljapur, Dist. Osmanabad

  
Principal

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### Department of Botany

### Conducting Co-curricular course

### “Soil & Water Analysis”

1. Name of Department: **Botany**
2. Type of Programme: **value added / skill based certificate course**
3. Title of Programme: **Certificate course in “Soil & Water Analysis”**
4. Name of Co-ordinator: **Dr. . D. S. Suryawanshi**
4. Faculty offered: **B.Sc**
5. Name of Teachers: **Mrs .D. A. Kalshetti**  
**Shri. R. V. Ghodke**  
**Shri. S.G. Chavan**
6. Duration: **30 hours**
7. Theory: **15 Hours**
8. Practical: **15 Hours.**

Head   
head Department of Botany  
Jawahar College Andur,  
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Principal  
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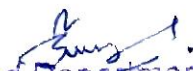
Date :- 28/09/2018

## Notice

All the students enrolled in certificate course in Soil & Water Analysis run by department of Botany are hereby informed that the Department of Botany is going to conduct a final test on "Soil & Water Analysis" during this month on

### Time-Table for Exam 2018-2019


Sr. No	Roll. Number	Name of Student	Hall Number
1	AB-01	Ku. Langade Shradha Shivanand	16
2	AB-02	Ku. Loke Mauli Sanjay	
3	AB-03	Ku. Lokhande Pooja Nasivant	
4	AB-04	Ku. Lokhande Stuti Nasivant	
5	AB-05	Ku. Madje Sulochana Pandit	
6	AB-06	Maitri Satyjeet Shivanand	
7	AB-07	Manale Laxman Angad	
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11	AB-11	Mendapure Sweta Vijay	16
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21	AB-21	Rathod Akash Kant	
22	AB-22	Rathod Avinash Anil	
23	AB-23	Rathod Gorakh Shankar	
24	AB-24	Rathod Mahesh Babu	
25	AB-25	Sadafule Makarand Manohar	
26	AB-26	Ku. Sagare Dipali Ramkrishana	


  
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27	AB-27	Sakhare Ganesh Nilappa	
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30	AB-30	Ku. Savant Swati Ram	
31	AB-31	Shaikh Fatru Mahamand	
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33	AB-33	Shetti Prasad Vishwanath	
34	AB-34	Ku. Shinde Geetashri Dnyanand	
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Co-coordinator

  
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शुचिं च विदित्वा ज्ञानं !

Shikshan Prasarak Mandal's Anadur

**JAWAHAR ARTS, SCIENCE & COMMERCE COLLEGE, ANADUR**

Tq. Tuljapur, Dist. Osmanabad-413 603

**NAAC GRADE - B++(CUPA 2.81)**

**President :- Shri. B.F.Kasture**

**Secretary :- Shri. S.N. Alure Guruji**

**I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9960242667)**

**☎ :- (02471) 246037, 246737**

Date: 29/09/2018

Department of Botany

Jawahar Arts, Science and Commerce College, Anadur

Add on Course on "Soil & Water Analysis"

Question Paper – 2018-2019

Date:


All questions are necessary

Each Ques. Carry 2 marks.

Total Marks: 40

1. The sum total of the exchangeable cations that a soil can absorb is called cation exchange capacity. Which clay mineral has the highest CEC?  
A. Kaolinite      B. Illite      C. Vermiculite      D. Montmorillonite
2. Most of the plants obtain nitrogen from the soil in the form of:  
A. Nitrate      B. Nitrite      C. Nitric acid      D. Nitrous oxide
3. Gully erosion is a type of soil erosion. What is the side slope of G3 Gully class?  
A. 8-15 %      B. 15%      C. More than 15 %      D. Less than 15 %
4. On the basis of soil salinity class, water can be used for irrigation purposes with some management practices. It comes under which class?  
A. C1      B. C2      C. C3      D. C4
5. Which among the following soil has the highest area in India?  
A. Red Soil      B. Laterite Soil      C. Desert Soil      D. Alluvial Soil
6. The horizons which make up the profile of a forest soil would include:  
A. A, B & C      B. A, C & O      C. B & O      D. A, B, C & O

  
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7. In the composition of soil on volume basis mineral matter comprises 45 %, what is the % of soil water and soil air?

- A. 45      B. 5      C. 50      D. 25

8. Which of the following soil is not suitable for nursery crops?

- A. Alluvial soil      B. Red soil      C. Black soil      D. Both a and b

9. Which of the following soil has a characteristic of self-ploughing?

- A. Black soil      B. Laterite soil      C. Peaty soil      D. Both a and b

Ans. A

10. Alluvial soil is rich in \_\_\_\_\_ macronutrients.

- A. P      B. N      C. K      D. Zn

11. Sluice valves are fitted in a distribution system

- A. Along straight length of pipes at suitable intervals      B. At the junctions of the pipes  
C. At the branching off points of sub-mains      D. All the above

12. The ratio of maximum hourly consumption and average hourly consumption of the maximum day, is

- (A) 1.2      (B) 1.5      (C) 1.8      (D) 2.7

13. If the average daily demand of a city of 50,000 population, is 20 m.l.d., the maximum daily demand is

- (A) 24 mld      (B) 30 mld      (C) 36 mld      (D) 54 mld

14. Aqueducts are generally designed

- (A) Circular      (B) Rectangular      (C) Horse shoe section      (D) All the above

15. Water losses in water supply, is assumed as

- (A) 5 %      (B) 7.5 %      (C) 10 %      (D) 15 %

16. The requirement of water per capita per day, is

- (A) 90 liters      (B) 120 liters      (C) 250 liters      (D) 400 liters

17. The maximum permitted loss of head in a rapid sand filter, is

- (A) 1 m      (B) 2 m      (C) 3 m      (D) 4 m

18. Mud balls may be removed by

- (A) Breaking and washing      (B) Washing the filter with a solution of caustic soda  
(C) Removing, cleaning and replacing the damaged sand      (D) All the above

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19. The lowest outlet sluice in a dam is provided  
(A) Below the dead storage (B) On the top level of dead storage (C) On the top level of useful storage (D) At the center of the dam

20. The strainer type tube well, is unsuitable for  
(A) Coarse gravels (B) Fine sandy strata (C) Clean gravels (D) None of these  
Correct Answer

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☎ :- (02471) 246037, 245737

Department of Botany

Jawahar Arts, Science and Commerce College, Anadur

Add on Course on Soil & Water Analysis

Mark List – 2018- 2019

Sr. No	Roll. Number	Name of Student	Class	Theory Out of 50 Marks	Practical Out of 40 Marks	Viva-Voce Out of 10 Marks	Total
1	AB-01	Ku. Langade Shradha Shivanand	B. Sc. II	40	30	4	74
2	AB-02	Ku. Loke Mauli Sanjay	B. Sc. II	42	34	7	83
3	AB-03	Ku. Lokhande Pooja Nasivant	B. Sc. II	38	32	6	76
4	AB-04	Ku. Lokhande Stuti Nasivant	B. Sc. II	36	32	5	73
5	AB-05	Ku. Madje Sulochana Pandit	B. Sc. II	38	30	6	74
6	AB-06	Maitri Satyjeet Shivanand	B. Sc. II	36	36	7	79
7	AB-07	Manale Laxman Angad	B. Sc. II	38	34	7	79
8	AB-08	Ku. Mashalkar Chaitrali Subhash	B. Sc. II	32	32	8	72
9	AB-09	Ku. Matolkar Anjali Sadasiv	B. Sc. II	36	35	5	76
10	AB-10	Matolkar Mahesh Mahadev	B. Sc. II	40	36	6	82
11	AB-11	Mendapure Sweta Vijay	B. Sc. II	38	34	7	79
12	AB-12	Mkashe Omkar Kondiba	B. Sc. II	40	32	6	78
13	AB-13	More Akash Ram	B. Sc. II	42	33	5	80
14	AB-14	Ku. More Mayuri Vittal	B. Sc. II	40	34	6	80
15	AB-15	Ku. Mule Vibhavari Narsing	B. Sc. II	38	35	5	78
16	AB-16	Ku. Murte Sugal Siddheshwer	B. Sc. II	36	36	5	77
17	AB-17	Ku. Navgire Sushama Subhash	B. Sc. II	32	32	6	70
18	AB-18	Palampale Balaji Shivaji	B. Sc. II	40	32	5	77
19	AB-19	Patil Rakesh Rajshekar	B. Sc. II	38	34	5	77
20	AB-20	Pawar Rahul Subhash	B. Sc. II	36	25	5	66
21	AB-21	Rathod Akash Kant	B. Sc. II	36	28	6	70


*Singh*  
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22	AB-22	Rathod Avinash Anil	B. Sc. II	34	28	6	68
23	AB-23	Rathod Gorakh Shankar	B. Sc. II	38	30	5	74
24	AB-24	Rathod Mahesh Babu	B. Sc. II	32	32	6	70
25	AB-25	Sadafule Makarand Manohar	B. Sc. II	38	29	5	72
26	AB-26	Ka. Sagare Dipali Ramkrishana	B. Sc. II	40	30	4	74
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34	AB-34	Ku. Shinde Geetashri Dnyanand	B. Sc. II	36	32	5	73
35	AB-35	Ku. Shinde Rajeshri Danaji	B. Sc. II	38	30	6	74

  
Co-ordinator

(Dr. D. S. Suryawanshi)

  
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Certificate Course : Soil & Water Analysis

Course Outcome

By Successfully completing the course, Student will be able to:

To Analyze Soil & Water Samples

To Knowledge of Quality of soil & water

To Determine the Physiochemical parameter of Soil.

To Create awareness about clean environment

  
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Date: 10/10/2018

## Certificate Course Final Report

### On "Soil & Water Analysis-2018-2019"


Certificate course in Soil & Water Analysis is completed successfully with fruitful result. As per notice issued by department of Botany for students to made registration for this course, within little time 50 students registered their names for said course. Then by taking MCQ entrance test, we have selected 36 students. Meanwhile we have completed all the required formalities like CDC approval, syllabus design, and lecture distribution and also to nominate BOS members too. We have engaged 30 hours (15 hours for theory and 15 hours for practical).Meanwhile we have also engaged the doubt session also. Finally after syllabus completion we held final exam for said course and all the students enrolled for food chemistry certificate course successfully passed with good percentage marks. The Soil & Water Analysis certificate course question paper is of 50 marks.(25 question carry 2 marks each). Near about 17 students scored more than 40 marks, while remaining students scoring in between 37 to 40 marks. After result declaration we have organized a certificate distribution and award function for the students of course in kind presence of Hon. Principal. Dr. Umakant Chanshetti sir and our staff members' of Botany department.

  
Co-ordinator

(Dr. D. S. Suryawanshi )

  
Head of Department

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