

KRE Society's  
Karnatak Arts, Science and Commerce College, Bidar  
Department of Chemistry

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## Value added course on Soil and Water Testing

Course Co-ordinator

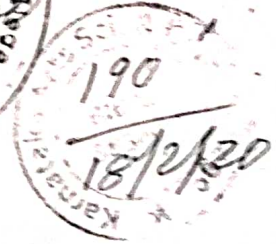
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Sri. A R Mamane  
Head and Associate Professor  
Department of Chemistry

Karnatak Arts Science and Commerce College, Bidar  
Society, Bidar  
To,  
The Principal,  
Karnatak Arts Science and Commerce College, Bidar



Date: 17/02/2020



Sub: Request to grant permission to start certificate course on "Soil and Water Analysis" for the year 2019-20

Respected Mam,

As per the directions of IQAC and NAAC guidelines, Department of Chemistry would like to start certificate course in "Soil and Water Analysis" from 20 February 2020 for advance learners with Intake capacity 25. In this connection, please permit us to collect the fees of Rs. 200 per head to meet the necessary expenses. This fees will be collected through challan and will be deposited in DCC Back A/C no. 05.

I hope you will permit and do the needful,

*D. S. TO put up challenge*

Sincerely

S. A. R. Mamane

Department of Chemistry  
Head Department of Chemistry  
Karnatak Arts Science and Commerce College, Bidar  
BIDAR-585101

OS) May be forwarded to Hon'ble president/ Secretary K.R. Society Bidar for permission to start the certificate course on "Soil and Water Analysis" from 20th February 2020 for advance learners with intake capacity 25 and permit us to collect the fees of Rs. 200/- Each student to meet the necessary expenditure and permit to deposit the collected fees in DCC Back A/C no. 05 counter BIDAR day to day.

*(Date 17/02/2020)*

VICE-PRINCIPAL forwarded to the Hon<sup>ble</sup>  
President/Secretary seeking permission to  
start a certificate course in "Soil and  
Water analysis" in Chemistry by collecting  
Rs. 200/- per student. The collected amount  
will be deposited into Dec Bank account No.  
5 (Principal account).

*[Signature]*  
18/12/20

Kalyana

Ans) As per directions and notice guidelines Department of  
Chemistry desires to start "Certificate course in  
"Soil and water analysis" cost by collecting Rs 200/- per  
student.  
Kindly permission be accorded to start the course  
by collecting Rs 200/- per student

*[Signature]*

permitted.  
B. [Signature]

A. R. Manna to attend  
Kalyana



ಕರ್ನಾಟಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ, ಬೀದರ  
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR



Estd 1970  
(Affiliated to Gulbarga University, Kalajuragi)

College with Potential for Excellence Status Awarded by UGC New Delhi

ISO 9001 : 2015



Golden Jubilee Celebration - 1970-2020

Date : 22-07-2019

To,

Dr. P. Vithal Reddy

Associate Professor

H.O.D of Chemistry

B.V.B College

Bidar.

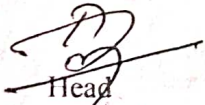
Sub: Request to serve on Board of Studies for Add on Course.

Dear Sir,

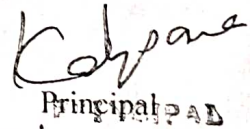
I am very happy to inform you that, our institution under Department of Chemistry would like to start an add on course titled " Soil & Water Testing ". In this context I am requesting you to serve as Member of Institutional Board of Studies for the above mentioned Course.

The meeting of Institutional BOS for an add on course on "Soil & Water Testing " is convened on 23-07-2019 at IQAC Room, in Karnatak Arts, Science & commerce college. Bidar at 11:30 am.

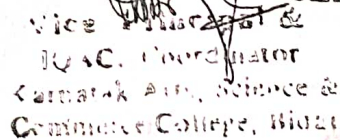
I hope you will accept this invitation and provide your expertise in development of curriculum for the above mentioned course.

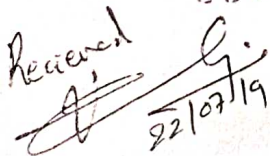
  
Head

Department of Chemistry  
Karnatak Arts, Science & Commerce College  
Bidar - 585401

  
Principal

Karnatak Arts Science &  
Commerce College, BIDAR

  
Vice Principal &  
IQAC, Coordinator  
Karnatak Arts, Science &  
Commerce College, Bidar

Received  
  
22/07/19



ಕರ್ನಾಟಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ, ಬೀದರ್  
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR

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Golden Jubilee Celebration - 1970-2020

Date → 23-07-

Minutes of Meeting of Institutional Board of Studies for

Add-on Course on

Soil and Water Testing

Held on 23<sup>rd</sup> July, 2019

The institutional BOS meeting of the Department of Chemistry for the add-on course on "Soil and Water Testing" held on 23/07/2019 at IQAC Room at 11:30 am.

Institutional BOS

Sl.No	Name	Institute	Designation
1.	Sri. Ashok Mamane	Head, Department of Chemistry, Karnatak Arts, Science and Commerce College, Bidar.	Chairman
2.	Sri. Vinod Kumar Mulge	Associate Professor, Department of Chemistry	Member Internal Expert
3.	Dr.S. B Mashetty	Associate Professor, Department of Chemistry	Member Internal Expert
4.	Dr. P.Yithal Reddy	Associate Professor HOD of Chemistry, B.V.B College. Bidar	External Expert

In the beginning of the meeting the Chairman of the Institutional BOS welcomed all the members and briefed them about the progress of the Department of Chemistry. The members expressed their highly appreciation and satisfaction about the courses and activities of the Department.

After the Institutional BOS discussed and resolved the following items

- **Item 1. Starting of the add - on course on Soil and Water Testing.**  
The BOS discussed the item and resolved to start the add -on course from August,2019.
- **Item 2. Approval of the Syllabus for add-on course.**  
The BOS discussed and approved the syllabus for the add-on course on Soil and Water Testing.

E-mail : principalkascc@gmail.com  
Fax : 08482-226503

Hyderabad Road, Karnataka State - 585401.  
Fax : 08482-226503

Cell : 9343834635  
Visit us @ www.kascc.in.net



Save Environment Save Earth





ಕರ್ನಾಟಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ, ಬಿಡಾರ  
**KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR**



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**Golden Jubilee Celebration - 1970-2020**

- **Item 3. Criteria for admission, regulation and policies to run the course and exam pattern.**  
The BOS discussed and approved the criteria for admission and resolved that the student should have completed successfully 10+2 with science faculty, should be currently in B.Sc Course with Chemistry as a subject in Karnatak college, Bidar. In addition to this BOS also finalized the rules and regulations to smooth conduct of course and pattern.

Meeting of BOS is concluded with vote of thanks by Sri Ashok Mamane, Head Department of Chemistry.

**Members present**

1. Sri. Ashok Mamane

*[Signature]*  
**HOD**  
**Department of Chemistry**  
Karnatak Arts Sc. & Comm. College  
BIDAR-585401

2. Sri. Vinod Kumar Mulge

3. Dr. S. B Mashetty

4. Dr. P. Vithal Reddy

*[Signature]*  
**HEAD**  
**Dept of CHEMISTRY**  
**B.V.B Degree College**  
**BIDAR-585403 (K.B.)**

*[Signature]*  
IQAC Co-ordinator

Vice-Principal &  
IQAC Co-ordinator  
Karnatak Arts, Science & Commerce College,  
Bidar

*[Signature]*  
Principal  
**PRINCIPAL**  
Karnatak Arts Science &  
Commerce College, BIDAR

E-mail : principalkascc@gmail.com  
Fax : 08482-226503

Hyderabad Road, Karnataka State - 585401.  
Fax : 08482-226503

Cell : 9343834635  
Visit us @ www.kascc.in.net



*Save Environment Save Earth*



KRE Society's  
Karnatak Arts, Science and Commerce College, Bidar  
Department of Chemistry

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**Value added-course on Soil and Water Testing**

**Preamble:** Soil and water are one of the most important natural resources for human life. Testing and analyzing soil and water and obtaining some important information about its properties can be used to determine the quality of soil and water. This kind of scientific inquiry tend to the understand the status of soil and water resources which are important for human and agriculture both. Soil analysis is considered as significant tool to understand the nutrient needs of the plants, where as water analysis is important because it identifies contaminants and prevents water-borne diseases.

Bidar district consists of large agriculturist population and hence this curse aimed to equip the students with tools and techniques and water and soil quality analysis by means of basic principles and procedures of chemistry, hence they can satisfy the local needs and social problems of farmers.

**Learning Outcomes**

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.

**Instructional Design:-**

This course is of 30 hours duration which includes theory classes, field Visit, Assignment and Field Project.

**Course Structure and Examination Scheme:-**

Total contact hours:

Theory Classes: 20 Hours

Practical Lab Work: 10 Hours

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30 Hours

Internal Marks: 40 Theory: 20 Practical: 20


External Marks: 60



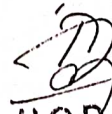
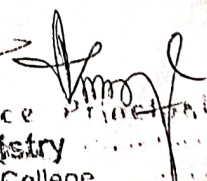
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Total Marks : 100

**Eligibility:** Students enrolled in B Sc program of this college

**No. of Seats:** 25

  
**HEAD**  
Dept of CHEMISTRY  
B.V.B Degree College  
BIDAR-585403 (K.B.)

  
  
  
  
**HOD** Vice Principal  
Department of Chemistry  
Karnatak Arts Sc. & Commr College  
BIDAR-585401

KRE Society's  
**Karnatak Arts, Science and Commerce College, Bidar**  
**Department of Chemistry**

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**Value added course on Soil and Water Testing**

**Theory:**

**Unit I-** Introduction to Soil analysis, Types of soil, Soil pollutants, role of soil testing for environment, Uses of soil analysis.

**Unit II-** Introduction to Water analysis, Types of Water, Water pollutants, role of water testing for environment, Uses of water analysis.

**Practicals:**

**Part I – Soil Analysis**


- 1) To determine PH of given soil sample.
- 2) To determine nutrient content (NPK) of soil.
- 3) To determine salinity of given soil sample.
- 4) To determine micronutrient content of soil sample.

**Part II – Water Analysis**

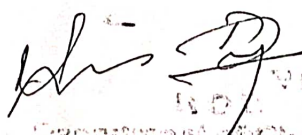
- 1) To determine hardness of water.
- 2) To determine PH of given water sample.
- 3) To determine alkalinity of water.
- 4) To determine TDS of given sample of water.

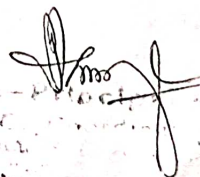
**References:**


1. Manual On Soil, Plant And Water Analysis – 1 Jan 2007, by Dhyan Singh (Author), A1 Publisher
2. Manual for Soil and Water Analysis, P Buurman et al. Backhuys Publishers Leiden, 1996

  
**HEAD**  
Dept of CHEMISTRY  
B.V.B Degree College  
BIDAR-585403 (K.B.)







  
**PRINCIPAL**  
Karnatak Arts Science  
& Commerce College, Bidar





**Karnatak Arts, Science & Commerce College, Bidar**

ESTD. 1970  
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College With Potential for Excellence



**Department of Chemistry**

Date: 03-01-2022

**NOTICE**

All the students are hereby informed that, the Department of Chemistry is starting the add-on course on **Soil and water Testing** from the **14-01-2022**, interested students can enrol their names on or before **10-01-2022** in the Department of Chemistry.

**HOD of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401**

**Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401**

KRE Society's					
Karnatak Arts, Science and Commerce College, Bidar					
Department of Chemistry					
Name of the Certificate Course:			Soil and Water Testing		
Period: January 2022-March 2022			Class: BSC I Sem		
S.No	UUCMNo	Name	Cell No	Email ID	Signature of the Student
1	U04AE21S0002	REVANSIDDA	9980243899	rvansiddasajjan02@gmail.com	
2	U04AE21S0005	GOPAL	9552017165	surnatgopal913@gmail.com	
3	U04AE21S0023	VEERSHETTY	9980155938	veershettymadival@gmail.com	
4	U04AE21S0031	RADHIKA	9900866011	radhikabirgond@gmail.com	
5	U04AE21S0040	PRAVEEN SADASHIV	9902393666	abcdpms123@gmail.com	
6	U04AE21S0076	AKASH	8105849385	malipatilakash7204@gmail.com	
7	U04AE21S0084	SYED LUKMAN	9880438920	syedulukman591@gmail.com	
8	U04AE21S0095	RAJESHWARI	7760671977	sanguswamy044@gmail.com	
9	U04AE21S0097	PAVAN	7892801324	pavanwadgave005@gmail.com	
10	U04AE21S0099	JYOTI	9900442740	rakeshtippa2005@gmail.com	
11	U04AE21S0109	RANI	7406451962	ranishivraj610@gmail.com	
12	U04AE21S0121	NAMEERA QURRAT	9449336913	nameeraqurrat0717@gmail.com	
13	U04AE21S0120	SHWETA	9902561877	abhishekambannanor@gmail.com	
14	U04AE21S0186	VISHAL	7204452160	poojahn052@gmail.com	
15	U04AE21S0199	VISHWAJEET	9844765057	yuvarajdevappa@gmail.com	
16	U04AE21S0198	Praveen Biradar	9591656784	biradarbasavaraj767@gmail.com	
17	U04AE21S0206	RAMKUMAR	8747829272	dhuleramkumar@gmail.com	
18	U04AE21S0246	NEHA ANJUM	9742253478	anjumneha138@gmail.com	
19	U04AE21S0290	M VIVEK	6363943616	vivekmycray000143@gmail.com	
20	U04AE21S0305	ANAND	9900864137	anandjotgond@gmail.com	
21	U04AE21S0314	UMESHA	9980678560	umeshnirnakar777@gmail.com	
22	U04AE21S0327	MD ISMAIL SHAH	8618697912	mdismailmailm@gmail.com	
23	U04AE21S0329	SAIKIRANREDDY	8748829707	reddyskrhge@gmail.com	
24	U04AE21S0336	SUDEEP	6362443704	sudeepbiradar17@gmail.com	

for  
HOD  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
BIDAR - 585 401

Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401



KRE Society's

# Karnatak Arts, Science and Commerce College, Bidar



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## ADMISSION FORM

Certificate/Value added/Skill Development/Diploma/Advance Diploma Courses  
&  
IAS/IPS/NET/SET Coaching Classes

Name of the Department CHEMISTRY Year 2021-22

Name of the Student RADHIKA

Father's/Guardian's Name PANDIT

Date of Birth

Date

Month

Year

08

05

2003



Address for Correspondence :

VTDYANAGAR, 11th CROSS  
BIDAR.

Semester/Class : BSC 1sem

Register No : UD4AE2180031

Percentage of previous semester : 87

Contact No : 9900866011

E-Mail ID : nadhikabirgond@gmail.com

Course to be Joined: Soil and water testing.

*Radhika*

Signature of the Student

*[Signature]*  
HOD/Coordinator

Chemistry Department

Karnatak Arts, Sc. & Comm. College,

BIDAR - 585 401

*[Signature]*

Principal

**PRINCIPAL**

Karnataka Arts Sci. & Com. College

BIDAR-585401



ESTD. 1942

**Karnatak Arts, Science & Commerce College, Bidar**

ESTD. 1970  
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**Department of Chemistry**

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Date: 11-01-2022

**NOTICE**

All the students of B.Sc V Sem are hereby informed that, the classes of "Add-on course" on Soil and water Testing will commence from 14 - 01 - 2022 and are directed to attend the classes as per the time table.

*for Ap*  
HOD  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401

*[Signature]*  
Principal  
**PRINCIPAL**  
Karnataka Arts Sci. & Com. College  
BIDAR-585401

K.R.E. Society's


**Karnatak Arts, Science and Commerce College, Bidar**

**Department of Chemistry**

Value added course on soil and Water testing

Time -Table 2021-2022

Date/time	11 to 12am	10:30 to 12:30 pm
Thursday		Practical
Friday	Theory	
Saturday	Theory	

  
**Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
BIDAR - 585 401**

  
**Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401**



K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course" on soil and water testing

Theory Attendance- 2022

I.No	Name of the student	26/02/22	4/3/22	5/3/22										
1	Revansidda	Re	Re	Re										
2	Gopal	Gumar	Gumar	Gumar										
3	Veershetty	Veershetty	Veershetty	Veershetty										
4	Radhika	Radhika	Radhika	Radhika										
5	Praveen Sadashiv	Praveen	Praveen	Praveen										
6	Akash	Akash	Akash	Akash										
7	Syed Lukman	Ab	Ab	Ab										
8	Rajeshwari	Rajeshwari	Rajeshwari	Rajeshwari										
9	Pavan	Pavan	Pavan	Pavan										
10	Jyoti	Jyoti	Jyoti	Jyoti										
11	Rani	Rani	Rani	Rani										
12	Nameera Qurrat	Nameera	Nameera	Nameera										
13	Shweta	Ab	Ab	Ab										
14	Vishal	Vishal	Vishal	Vishal										
15	Vishwajeet	Vishwajeet	Vishwajeet	Vishwajeet										
16	Praveen Biradar	Praveen	Praveen	Praveen										
17	Ramkumar	Ramkumar	Ramkumar	Ramkumar										
18	Neha Anjum	Neha Anjum	Neha Anjum	Neha Anjum										
19	M Vivek	M Vivek	M Vivek	M Vivek										
20	Anand	Anand		Anand										
21	Umesh	Umesh	Umesh	Umesh										
22	MD Ismail Shah	MD Ismail	MD Ismail	MD Ismail										
23	SaikiranReddy	Saikiran	Saikiran	Saikiran										
24	Sudeep	Sudeep	Sudeep	Sudeep										

for  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401

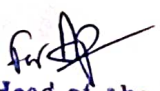
Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401

K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course "on soil and water testing

Practical Attendance- 2022

I.No	Name of the student	21/01/22	27/01/22	3/02/22	17/2/22	24/2/22	3/03/22	10/3/22		
1	Revansidda	Re	Re	Re	Re	Re	Re	Re		
2	Gopal	Gumar	Gumar	Gumar	Gumar	Gumar	Gumar	Gumar		
3	Veershetty	veershetty	veershetty	veershetty	veershetty	veershetty	veershetty	veershetty		
4	Radhika	Radhika	Radhika	Radhika	Radhika	Radhika	Radhika	Radhika		
5	Praveen Sadashiv	Puv	Puv	Puv	Puv	Puv	Puv	Puv		
6	Akash	Amit	Amit	Amit	Amit	Amit	Amit	Amit		
7	Syed Lukman	Ab	Ab	Ab	Ab	Ab	Ab	Ab		
8	Rajeshwari	Rajeshwari	Rajeshwari	Rajeshwari	Rajeshwari	Rajeshwari	Rajeshwari	Rajeshwari		
9	Pavan	Pavan	Pavan	Pavan	Pavan	Pavan	Pavan	Pavan		
10	Jyoti	Jyoti	Jyoti	Jyoti	Jyoti	Jyoti	Jyoti	Jyoti		
11	Rani	Rani	Rani	Rani	Rani	Rani	Rani	Rani		
12	Nameera Qurrat	Ng	Ng	Ng	Ng	Ng	Ng	Ng		
13	Shweta	Ab	Ab	Ab	Ab	Ab	Ab	Ab		
14	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal	Vishal		
15	Vishwajeet	Vishwajeet	Vishwajeet	Vishwajeet	Vishwajeet	Vishwajeet	Vishwajeet	Vishwajeet		
16	Praveen Biradar	Puv	Puv	Puv	Puv	Puv	Puv	Puv		
17	Ramkumar	Ramkumar	Ramkumar	Ramkumar	Ramkumar	Ramkumar	Ramkumar	Ramkumar		
18	Neha Anjum	Neha Anjum	Neha Anjum	Neha Anjum	Neha Anjum	Neha Anjum	Neha Anjum	Neha Anjum		
19	M Vivek	vivek	vivek	vivek	vivek	vivek	vivek	vivek		
20	Anand	Anand	Anand	Anand	Anand	Anand	Anand	Anand		
21	Umesh	umesh	umesh	umesh	umesh	umesh	umesh	umesh		
22	MD Ismail Shah	MD Ismail Shah	MD Ismail Shah	MD Ismail Shah	MD Ismail Shah	MD Ismail Shah	MD Ismail Shah	MD Ismail Shah		
23	SaikiranReddy	Sa	Sa	Sa	Sa	Sa	Sa	Sa		
24	Sudeep	Sudeep	Sudeep	Sudeep	Sudeep	Sudeep	Sudeep	Sudeep		

  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401

  
Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401





**Karnatak Arts, Science & Commerce College, Bidar**

ESTD. 1970  
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College With Potential for Excellence




**Department of Chemistry**

Date: 01 - 02 -2022

**NOTICE**

All the students enrolled in Add-on course on "Soil and water Testing" are here by informed that, the course Internal examination is scheduled on 05 - 02 - 2022 from 11am - 12pm.

*for*  
**HOD.**  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401

  
**Principal**  
**PRINCIPAL**  
Karnataka Arts Sci. & Com. College  
BIDAR-585401

K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course" on soil and water testing

Internal Exam Attendance- 2022

Sl.No	Name of the student	Semester	Signature(T)	Signature(P)
1	Revansidda	B.Sc I Sem		
2	Gopal	B.Sc I Sem		
3	Veershetty	B.Sc I Sem		
4	Radhika	B.Sc I Sem		
5	Praveen Sadashiv	B.Sc I Sem		
6	Akash	B.Sc I Sem		
7	Syed Lukman	B.Sc I Sem		
8	Rajeshwari	B.Sc I Sem		
9	Pavan	B.Sc I Sem		
10	Jyoti	B.Sc I Sem		
11	Rani	B.Sc I Sem		
12	Nameera Qurrat	B.Sc I Sem		
13	Shweta	B.Sc I Sem		
14	Vishal	B.Sc I Sem		
15	Vishwajeet	B.Sc I Sem		
16	Praveen Biradar	B.Sc I Sem		
17	Ramkuar	B.Sc I Sem		
18	Neha Anjum	B.Sc I Sem		
19	M Vivek	B.Sc I Sem		
20	Anand	B.Sc I Sem		
21	Umesh	B.Sc I Sem		
22	MD Ismail Shah	B.Sc I Sem		
23	SaikiranReddy	B.Sc I Sem		
24	Sudeep	B.Sc I Sem		

Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401

Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401

K. R. E. SOCIETY'S  
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR  
Internal Test - 2022

**B.Sc I SEMESTER**      **SUB : SOIL AND WATER TESTING(ADD ON COURSE)**      **Marks : 20**  
NAME:-

1. The water content of a soil sample cannot be determined by \_\_\_\_\_ method.  
a) oven drying                      b) alcohol  
c) calcium carbide                d) pipette
2. In oven drying method, the soil sample is kept for about \_\_\_\_\_ hours in the oven.  
a) 1            b) 2            c) 24            d) 48
3. An organic soil sample is kept in oven for its water content determination. The temperature preferred is \_\_\_\_\_  
a) 60°            b) 80°  
c) 105°            d) 110°
4. \_\_\_\_\_ method is specially suited to a circumstance where water content is to be quickly determined for the purpose of proper field control.  
a) Oven drying            b) Sand bath  
c) Alcohol                d) Calcium carbide
5. In pycnometer method of water content determination, it is necessary to accurately know the specific gravity  $G$  of soil whose water content is to be determined.  
a) True    b) False
6. An oven – dried soil of mass 400g is placed in a pycnometer where empty weight is 573g. The mass of pycnometer with soil is 973g. The total mass of pycnometer with water and soil inside is 1605g. The pycnometer filled with water alone has mass of 1480. The specific gravity of solids is 2.65. Its water content is \_\_\_\_\_  
a) 40.456            b) 46.504  
c) 23.236            d) 6.423
7. In calcium carbide method, the gas produced is \_\_\_\_\_  
a) methane                      b) carbon dioxide  
c) acetylene                      d) oxygen
8. The water content of soil deposit in the in-situ condition is determinate by \_\_\_\_\_ method.  
a) radiation                      b) pycnometer  
c) calcium carbide            d) oven – dry
9. Sieve analysis is meant for \_\_\_\_\_  
a) coarse-grained soils                      b) fine-grained soils  
c) coarse-grained gravel                      d) silt

10. In Indian Standard (IS : 460-11962) the sieve sizes are given by \_\_\_\_\_  
a) number of openings      b) number of openings per inch  
c) size of aperture in mm      d) size of aperture in cm

11. The portion retained on \_\_\_\_\_ IS sieve is termed as gravel fraction.  
a) 4.75mm      b) 2mm  
c) 425micron      d) 75micron

12. The receiver at the bottom of the assembly in sieve shaking machine is \_\_\_\_\_  
a) 4.75mm sieve      b) 425micron  
c) pan      d) 75micron

13. Sieving is performed by arranging the various sieves one over the other in the order of their mech openings.  
a) True      b) False

14. \_\_\_\_\_ minutes of shaking is done for soil with small particles.  
a) 2      b) 10  
c) 15      d) 60

15. The percentage of soil retained on each sieve is calculated on the basis of \_\_\_\_\_  
a) total mass      b) total weight  
c) volume of sample      d) density of soil

16. The soil portion passing through 4.75 mm sieve is washed for further sieve analysis.  
a) True      b) False

17. \_\_\_\_\_ is used for washing the soil portion passing through 4.75 mm sieve.  
a) distilled water      b) 2g of sodium hexametaphosphate per litre of water  
c) 10% of brine solution      d) kerosene

18. Which of the following, cannot be used as a dispersing agent?  
a) Sodium oxalate      b) Sodium polyphosphate  
c) Sodium silicate      d) Sodium oxide

19. The process of removal of organic matter and calcium compounds in the dispersion method is \_\_\_\_\_  
a) Pretreatment      b) Sedimentation  
c) Evaporation      d) None of the mentioned

20. Which of the following are used as a standard sedimentation method in a laboratory?  
a) Sedimentation analysis method      b) Hydrometer method  
c) Pipette method      d) Sand replacement method

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Internal Test - 2022

B.Sc I SEMESTER      SUB : SOIL AND WATER TESTING (ADD ON COURSE)      Marks : 20

NAME:- RADHIKA

13  
-----  
20

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a) oven drying      b) alcohol  
c) calcium carbide       d) pipette
2. In oven drying method, the soil sample is kept for about \_\_\_\_\_ hours in the oven.  
 a) 1      b) 2      c) 24      d) 48
3. An organic soil sample is kept in oven for its water content determination. The temperature preferred is \_\_\_\_\_  
 a) 60°      b) 80°  
c) 105°      d) 110°
4. \_\_\_\_\_ method is specially suited to a circumstance where water content is to be quickly determined for the purpose of proper field control.  
 a) Oven drying      b) Sand bath  
c) Alcohol       d) Calcium carbide
5. In pycnometer method of water content determination, it is necessary to accurately know the specific gravity G of soil whose water content is to be determined.  
 a) True      b) False
6. An oven - dried soil of mass 400g is placed in a pycnometer where empty weight is 573g. The mass of pycnometer with soil is 973g. The total mass of pycnometer with water and soil inside is 1605g. The pycnometer filled with water alone has mass of 1480. The specific gravity of solids is 2.65. Its water content is \_\_\_\_\_  
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K.R.E. Society  
Karnatak Arts, Science & Commerce College, Bidar.

Department of Chemistry  
Add on course On Soil & Water Testing

Internal Key Answer 2021 – 2022


Q. No.	Ans.	Q. No.	Ans.
1	d	11	a
2	c	12	c
3	a	13	a
4	d	14	b
5	a	15	a
6	b	16	a
7	c	17	b
8	a	18	d
9	a	19	a
10	c	20	c

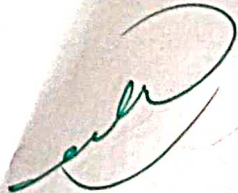
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Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course" on soil and water testing

Marks List- 2022

Sl.No	Name of the student	Internal Marks
1	Revansidda	20
2	Gopal	18
3	Veershetty	14
4	Radhika	18
5	Praveen Sadashiv	16
6	Akash	20
7	Syed Lukman	Ab
8	Rajeshwari	18
9	Pavan	17
10	Jyoti	18
11	Rani	18
12	Nameera Qurrat	14
13	Shweta	Ab
14	Vishal	17
15	Vishwajeet	19
16	Praveen Biradar	14
17	Ramkumar	18
18	Neha Anjum	18
19	M Vivek	15
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**Department of Chemistry**

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Date: 02 -03-2022

**NOTICE**

All the students enrolled in Add-on course on “Soil and water Testing” are here by informed that, the course Practical examination is scheduled on 08 – 03 -2022 from 11am – 1pm.

*for Ap*  
HOD  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College  
B I D A R - 585 401

  
Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401

NAME:- Ramkumar S/o Ashok

19  
20

## Determination of total hardness of water

AIM:- "To determine the total hardness of water i.e presence of calcium & magnesium in the tap water"

Apparatus:- Burette, Conical flask, Beaker, measuring flask, pipette

Chemical:- 0.01N EDTA solution, 0.01N  $ZnSO_4$  solution, buffer solution & Eriochrome Black-T etc

### Preparation of standard solution

#### 1) 0.01N EDTA solution

372.24 g of EDTA  $\rightarrow$  Dissolved in 1000ml of distilled water  $\rightarrow$  1N

3.7224 g of EDTA  $\rightarrow$  Dissolved in 1000ml of distilled water  $\rightarrow$  0.01N

1.8612 g of EDTA  $\rightarrow$  Dissolved in 500ml of distilled water  $\rightarrow$  0.01N

#### 2) 0.01N $ZnSO_4$ solution

287.8 g of  $ZnSO_4$   $\rightarrow$  Dissolved in 1000ml of distilled water  $\rightarrow$  1N

2.878 g of  $ZnSO_4$   $\rightarrow$  Dissolved in 1000ml of distilled water  $\rightarrow$  0.01N

0.2878 g of  $ZnSO_4$   $\rightarrow$  Dissolved in 1000ml of distilled water  $\rightarrow$  0.01N

### 3) Preparation of eriochrome Black-T (EB-T)

0.2g of EB-T indicator is dissolved in 50ml of triethanol amine & 5ml of the ethyl alcohol.

### 4) Preparation of Buffer solution

Dissolve 7g of pure ammonium chloride in 50ml of ammonia solution dilute the solution to 100ml with distilled water.

### Standardisation of EDTA solution

1) Solution in Burette  $\Rightarrow$  0.01N EDTA solution

2) Solution of conical flask  $\Rightarrow$  10ml Zn salt 2 to 3 drops of EB-T

3) Indicator used  $\Rightarrow$  Eriochrome Black-T

4) End point  $\Rightarrow$  wine red to blue.

$$\text{Burette Reading (BR)} = 12 \text{ ml}$$

$$N_1 V_1 = N_2 V_2$$

$$N_1 = \frac{N_2 V_2}{V_1}$$

$$N_1 = \frac{0.01 \times 10}{\text{B.R}} = N_2 \frac{0.01 \times 10}{10.6}$$

$$N_1 = 0.0094 \text{ N}$$

1ml of 0.01N EDTA solution  $\rightarrow$  0.4g of calcium

0.0094N of EDTA solution  $\rightarrow$  'x' gr. of calcium.

$$x = \frac{0.0094 \times 0.4}{0.01}$$
$$= 0.376 \text{ g of calcium}$$

Amount of calcium present in given 0.0094N EDTA solution  $y = x \times \text{MBR}$

$\therefore$  MBR = 10.7 ml of 0.01N EDTA solution contain 'y' gms of calcium

$$y = \text{BR} \times \text{C.F}$$

$$= 0.376 \times 10^3 \times 10.7$$

$$= 0.376 \times 10^3 \times 10.7$$

$$= 3.76 \times 10^3 \text{ gm/100ml}$$

$$y = 3.76 \times 10^{-3} \times 10.7 \times 100 \text{ ml}$$

$$= 3.76 \times 10^{-3} \times 10$$

$$= 37.16 \times 10^{-3} \text{ gm/100ml}$$

Result  $\Rightarrow$  The amount of calcium & magnesium in the solution

The amount of 'Ca' present in 10ml of tap water =  $3.716 \times 10^{-3} \text{ g/10ml}$

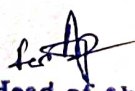
The amount of 'Ca' present in 100ml of tap water =  $37.16 \times 10^{-3} \text{ g/100ml}$

K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

“Add on Course ”on soil and water testing

Marks List- 2022

Sl.No	Name of the student	Practical Marks
1	Revansidda	19
2	Gopal	19
3	Veershetty	17
4	Radhika	18
5	Praveen Sadashiv	15
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**Department of Chemistry**

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Date: 09 -03-2022

**NOTICE**

All the students enrolled in Add-on course on "Soil and water Testing" are here by informed that, the course External examination is scheduled on 12/03/2022 from 10am – 11am.

**HOD,**

**Chemistry Department**

**Karnatak Arts, Sc. & Comm. College,**

**B I D A R - 585 401**

**Principal**

**PRINCIPAL**

**Karnataka Arts Sci. & Com. College**


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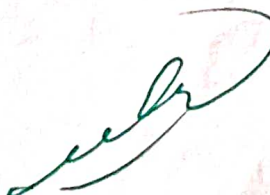
K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course "on soil and water testing

Theory Exam Attendance- 2022

Sl.No	Name of the student	Semester	Signature
1	Revansidda	B.Sc I Sem	Re
2	Gopal	B.Sc I Sem	Gopnar
3	Veershetty	B.Sc I Sem	Veershetty
4	Radhika	B.Sc I Sem	Radhika
5	Praveen Sadashiv	B.Sc I Sem	Praveen
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8	Rajeshwari	B.Sc I Sem	Rajeshwari
9	Pavan	B.Sc I Sem	Pavan
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11	Rani	B.Sc I Sem	Rani
12	Nameera Qurrat	B.Sc I Sem	Nameera
13	Shweta	B.Sc I Sem	Ab
14	Vishal	B.Sc I Sem	Vishal
15	Vishwajeet	B.Sc I Sem	Vishwajeet
16	Praveen Biradar	B.Sc I Sem	Praveen
17	Ramkuar	B.Sc I Sem	Ramkuar
18	Neha Anjum	B.Sc I Sem	Neha Anjum
19	M Vivek	B.Sc I Sem	M Vivek
20	Anand	B.Sc I Sem	Anand
21	Umesh	B.Sc I Sem	Umesh
22	MD Ismail Shah	B.Sc I Sem	MD Ismail Shah
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24	Sudeep	B.Sc I Sem	Sudeep

  
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K. R. E. SOCIETY'S  
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR  
Theory Exam - 2022

B.Sc I SEMESTER      SUB : SOIL AND WATER TESTING(ADD ON COURSE )      Marks : 60

NAME:-

1. Hue denotes

- (A) Dominant spectrum      (B) Lightness\_or\_brightness      (C) Purity      (D) Intensity

2. Phosphorus uptake in alkali soil in the form of \_\_\_\_\_

- (A)  $H_2PO_4^-$       (B)  $HPO_4^{2-}$       (C)  $PO_4^{3-}$       (D)  $H_3PO_4$

3. Which fertilizer produce acidity in soil

- (A) Ammonium sulfate      (B) Sodium nitrate  
(C) Calcium ammonium nitrate      (D) Calcium nitrate

4. Maximum N content found in N fertilizer

- (A) Urea      (B) Anhydrous ammonia      (C) Sodium nitrate      (D) Ammonium sulphate

5. Rock phosphate has  $P_2O_5$

- (A) 10-20%      (B) 20-40%      (C) 30-50 %      (D) 20-30%

6. The conversion factor for calculating P from  $P_2O_5$

- (A)  $P_2O_5 \times 2.29$       (B)  $P \times 0.44$       (C)  $P \times 2.29$       (D)  $P_2O_5 \times 0.44$

7. The phenomenon slickenside found in which soil

- (A) Inceptisol      (B) Vertisol      (C) Gelisol      (D) Spodosol

8. Which organic fraction not soluble in both acid and alkali

- (A) Fulvic      (B) Humic      (C) Humin      (D) All of the above

9. In munsell colour chart hue 10 represents as \_\_\_\_\_

- (A) Red      (B) Black      (C) Grey      (D) Yellow

10. pF scale for Field capacity is

- (A) 2      (B) 2.5      (C) 3.5      (D) 4.5

11. Available water held between

- (A) Saturation to wilting point      (B) Field capacity to hygroscopic coefficient  
(C) Only field capacity      (D) Field capacity to wilting point

12. Soil colloidal particle shows the phenomena

- (A) Plasticity      (B) Adhesion and cohesion      (C) Flocculation      (D) All of the above

13. The central cation on silica tetrahedron is \_\_\_\_\_

- (A)  $Al^{3+}$       (B)  $Si^{4+}$       (C)  $Fe^{2+}$       (D) None of the above

14. Which plant is used for indication of permanent wilting point?

- (A) Safflower      (B) Sunflower      (C) Marigold      (D) Both A and C

15. Mica is a type of clay mineral  
 (A) 1:1 (B) 2:1  
 (C) 2:1:1 (D) None of the above
16. Hydrogen bond found in which clay mineral  
 (A) Kaolinite (B) Montmorillonite (C) Vermiculite (D) Beidelite
17. Base saturation in lateritic soil  
 (A) < 40 % (B) > 40% (C) < 20% (D) > 20%
18. Immobilization of sulphur occur in soil when C:S ratio is  
 (A) < 300:1 (B) > 300:1 (C) > 400:1 (D) > 200:1
19. Denitrification is a process of  
 (A) Oxidation (B) Reduction (C) Hydration (D) Carbonation
20. Microorganism involve in conversion from nitrite to nitrate  
 (A) Nitrosomonas (B) Nitrobactor (C) Pseudomonas (D) Bacillus
21. Thiourea is type of fertilizer  
 (A) Slow release (B) Nitrification inhibitors  
 (C) Natural nitrification inhibitors (D) Artificial nitrification inhibitors
22. Chemical formula of thiourea is \_\_\_\_\_  
 (A) CO(NH<sub>2</sub>)<sub>2</sub> (B) SC(NH<sub>2</sub>)<sub>2</sub> (C) HCN (D) None of the above
23. N content in thiourea is \_\_\_\_\_  
 (A) 46% (B) 36.8% (C) 22.5% (D) 33%
24. Quantity of soil to be taken for texture analysis  
 (A) 10g (B) 20g (C) 30g (D) 40g
25. The K<sub>2</sub>O content in Illite varied between  
 (A) 6 to 10% (B) 2 to 4% (C) 10 to 15% (D) 33%
26. The microorganism lies below < 10°C is called \_\_\_\_\_  
 (A) Psychrophiles (B) Mesophiles (C) Thermophiles (D) None of the above
27. Thermophiles organism lies in temperature  
 (A) > 45°C (B) > 25°C (C) < 45°C (D) < 25°C
28. Optimum temperature for mesophile  
 (A) 10-20°C (B) 20-40°C (C) 40-60°C (D) 15-20°C
29. Which organism derive their energy from oxidation of complex organic compound  
 (A) Heterotrophs (B) Autotrophs (C) Chemotrophs (D) Lithotrophs
30. Organism utilize carbon from CO<sub>2</sub> for their cellular synthesis  
 (A) Heterotrophs (B) Chemotrophs (C) Autotrophs (D) None of the above
31. Most of the soil organism is \_\_\_\_\_  
 (A) Psychrophiles (B) Mesophiles (C) Thermophiles (D) All of the above



32. Optimum growth of bacteria in soil  
 (A) Acidic (B) Alkali (C) Neutral to slightly alkaline (D) Slightly acidic to neutral
33. Fungi growth optimum in pH  
 (A) 2.5-4.5 (B) 4.5-6.5 (C) 6.5-7.5 (D) 7.5-8.5
34. Actinomycetes prefer which condition for their growth  
 (A) Slightly alkaline (B) Alkali (C) Acidic (D) Neutral
35. Aroma of earthy smell in first shower of monsoon is due to \_\_\_\_\_  
 (A) Actinomycetes (B) Bacteria (C) Fungi (D) None of the above
36. Which genera of bacteria found maximum in soil?  
 (A) Azotobacter (B) Pseudomonas (C) Bacillus (D) All of the above
37. Rhizobium is an \_\_\_\_\_ organism  
 (A) Heterotrophs anaerobic (B) Heterotrophs aerobic  
 (C) Autotrophs anaerobic (D) Autotrophs aerobic
38. Which nutrient influence the nodule formation and nitrogen fixation in soil?  
 (A) pH (B) N (C) P (D) All of the above
39. Nitrification process ceases at pH  
 (A) < 5 (B) < 6 (C) < 4 (D) < 7
40. Denitrification mostly takes place in \_\_\_\_\_  
 (A) Aerobic (B) Anaerobic (C) Both (D) None of the above
41. Nitrification rapid in \_\_\_\_\_ season  
 (A) Winter (B) Rainy (C) Summer (D) All of the above
42. The peak microbial population was observed in soil generally after addition of residue  
 (A) 3-4 week (B) 2-3 week (C) 3-4 days (D) 1-2 week
43. For mineralization of P optimum ratio of C:N:P should be \_\_\_\_\_  
 (A) 100:10:1 (B) 50:10:1 (C) 80:10:1 (D) 30:10:1
44. Ammonia volatilization is purely process of \_\_\_\_\_  
 (A) Physical (B) Chemical (C) Biological (D) None of the above
45. Which element suppressed Downey mildew of pear millets?  
 (A) Chloride (B) Fluoride (C) Bromide (D) Lithium
46. Improper development of wheat inflorescence is due to deficiency of  
 (A) Molybdenum (B) Boron (C) Calcium (D) Magnesium
47. Organic matter obtained  
 (A) OC x 1.724 (B) OC x 2.24 (C) OC x 1.55 (D) OC x 1.64
48. Saturated hydraulic conductivity is measured by \_\_\_\_\_  
 (A) Pycnometer (B) Tensiometer (C) Amoomezeter (D) Hydrometer

49. Hydraulic conductivity is found to decrease in the following order

- (A) K soil > Ca – soil > Na – soil      (B) Na – soil > K – soil > Ca – soil  
(C) Ca – soil < K – soil < Na – soil      (D) Ca – soil > K – soil > Na – soil

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- (A) Jalshakti      (B) Fentachlore      (C) Hydrotech      (D) None of the above

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- (A) KCl      (B) Colour reagent      (C) Impurities      (D) All of the above

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- (A) Igneous rock      (B) Sedimentary rock      (C) Metamorphic rocks      (D) All of the above

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- (A) Permanent wilting point      (B) Hygroscopic point      (C) Field capacity      (D) None of the above

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- (A) Solonchalk      (B) Solonetz      (C) Sodochalk      (D) None of the above

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K. R. E. SOCIETY'S  
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR  
Theory Exam - 2022

B.Sc I SEMESTER SUB: SOIL AND WATER TESTING(ADD ON COURSE) Marks : 60

NAME:- Radhika

51/60

1. Hue denotes  
(A) Dominant spectrum (B) Lightness or brightness (C) Purity (D) Intensity
2. Phosphorus uptake in alkali soil in the form of \_\_\_\_  
(A)  $H_2PO_4^-$  (B)  $HPO_4^{2-}$  (C)  $PO_4^{3-}$  (D)  $H_3PO_4$
3. Which fertilizer produce acidity in soil  
(A) Ammonium sulfate (B) Sodium nitrate  
(C) Calcium ammonium nitrate (D) Calcium nitrate
4. Maximum N content found in N fertilizer  
(A) Urea (B) Anhydrous ammonia (C) Sodium nitrate (D) Ammonium sulphate
5. Rock phosphate has  $P_2O_5$   
(A) 10-20% (B) 20-40% (C) 30-50% (D) 20-30%
6. The conversion factor for calculating P from  $P_2O_5$   
(A)  $P_2O_5 \times 2.29$  (B)  $P \times 0.44$  (C)  $P \times 2.29$  (D)  $P_2O_5 \times 0.44$
7. The phenomenon slickenside found in which soil  
(A) Inceptisol (B) Vertisol (C) Gelisol (D) Spodosol
8. Which organic fraction not soluble in both acid and alkali  
(A) Fulvic (B) Humic (C) Humin (D) All of the above
9. In munsell colour chart hue 10 represents as \_\_\_\_  
(A) Red (B) Black (C) Grey (D) Yellow
10. pF scale for Field capacity is  
(A) 2 (B) 2.5 (C) 3.5 (D) 4.5
11. Available water held between  
(A) Saturation to wilting point (B) Field capacity to hygroscopic coefficient  
(C) Only field capacity (D) Field capacity to wilting point
12. Soil colloidal particle shows the phenomena  
(A) Plasticity (B) Adhesion and cohesion (C) Flocculation (D) All of the above
13. The central cation on silica tetrahedron is \_\_\_\_  
(A)  $Al^{3+}$  (B)  $Si^{4+}$  (C)  $Fe^{2+}$  (D) None of the above
14. Which plant is used for indication of permanent wilting point?  
(A) Safflower (B) Sunflower (C) Marigold (D) Both A and C

15. Mica is a type of clay mineral  
 (A) 1:1 (B) 2:1  
 (C) 2:1:1 (D) None of the above
16. Hydrogen bond found in which clay mineral  
 (A) Kaolinite (B) Montmorillonite (C) Vermiculite (D) Beidellite
17. Base saturation in lateritic soil  
 (A) < 40% (B) > 40% (C) < 20% (D) > 20%
18. Immobilization of sulphur occur in soil when C:S ratio is  
 (A) < 300:1 (B) > 300:1 (C) > 400:1 (D) > 200:1
19. Denitrification is a process of  
 (A) Oxidation (B) Reduction (C) Hydration (D) Carbonation
20. Microorganism involve in conversion from nitrite to nitrate  
 (A) Nitrosomonas (B) Nitrobactor (C) Pseudomonas (D) Bacillus
21. Thiourea is type of fertilizer  
 (A) Slow release (B) Nitrification inhibitors  
 (C) Natural nitrification inhibitors (D) Artificial nitrification inhibitors
22. Chemical formula of thiourea is \_\_\_\_\_  
 (A) CO(NH<sub>2</sub>)<sub>2</sub> (B) SC(NH<sub>2</sub>)<sub>2</sub> (C) HCN (D) None of the above
23. N content in thiourea is \_\_\_\_\_  
 (A) 46% (B) 36.8% (C) 22.5% (D) 33%
24. Quantity of soil to be taken for texture analysis  
 (A) 10g (B) 20g (C) 30g (D) 40g
25. The K<sub>2</sub>O content in Illite varied between  
 (A) 6 to 10% (B) 2 to 4% (C) 10 to 15% (D) 33%
26. The microorganism lies below < 10°C is called \_\_\_\_\_  
 (A) Psychrophiles (B) Mesophiles (C) Thermophiles (D) None of the above
27. Thermophiles organism lies in temperature  
 (A) > 45°C (B) > 25°C (C) < 45°C (D) < 25°C
28. Optimum temperature for mesophile  
 (A) 10-20°C (B) 20-40°C (C) 40-60°C (D) 15-20°C
29. Which organism derive their energy from oxidation of complex organic compound  
 (A) Heterotrophs (B) Autotrophs (C) Chemotrophs (D) Lithotrophs
30. Organism utilize carbon from CO<sub>2</sub> for their cellular synthesis  
 (A) Heterotrophs (B) Chemotrophs (C) Autotrophs (D) None of the above
31. Most of the soil organism is \_\_\_\_\_  
 (A) Psychrophiles (B) Mesophiles (C) Thermophiles (D) All of the above

32. Optimum growth of bacteria in soil  
 (A) Acidic (B) Alkali (C) Neutral to slightly alkaline (D) Slightly acidic to neutral
33. Fungi growth optimum in pH  
 (A) 2.5-4.5 (B) 4.5-6.5 (C) 6.5-7.5 (D) 7.5-8.5
34. Actinomycetes prefer which condition for their growth  
 (A) Slightly alkaline (B) Alkali (C) Acidic (D) Neutral
35. Aroma of earthy smell in first shower of monsoon is due to \_\_\_\_\_  
 (A) Actinomycetes (B) Bacteria (C) Fungi (D) None of the above
36. Which genera of bacteria found maximum in soil?  
 (A) Azotobacter (B) Pseudomonas (C) Bacillus (D) All of the above
37. Rhizobium is an \_\_\_\_\_ organism  
 (A) Heterotrophs anaerobic (B) Heterotrophs aerobic  
 (C) Autotrophs anaerobic (D) Autotrophs aerobic
38. Which nutrient influence the nodule formation and nitrogen fixation in soil?  
 (A) pH (B) N (C) P (D) All of the above
39. Nitrification process ceases at pH  
 (A) < 5 (B) < 6 (C) < 4 (D) < 7
40. Denitrification mostly takes place in \_\_\_\_\_  
 (A) Aerobic (B) Anaerobic (C) Both (D) None of the above
41. Nitrification rapid in \_\_\_\_\_ season  
 (A) Winter (B) Rainy (C) Summer (D) All of the above
42. The peak microbial population was observed in soil generally after addition of residue  
 (A) 3-4 week (B) 2-3 week (C) 3-4 days (D) 1-2 week
43. For mineralization of P optimum ratio of C:N:P should be \_\_\_\_\_  
 (A) 100:10:1 (B) 50:10:1 (C) 80:10:1 (D) 30:10:1
44. Ammonia volatilization is purely process of \_\_\_\_\_  
 (A) Physical (B) Chemical (C) Biological (D) None of the above
45. Which element suppressed Downey mildew of pear millets?  
 (A) Chloride (B) Fluoride (C) Bromide (D) Lithium
46. Improper development of wheat inflorescence is due to deficiency of  
 (A) Molybdenum (B) Boron (C) Calcium (D) Magnesium
47. Organic matter obtained  
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Karnatak Arts, Science & Commerce College, Bidar.

Department of Chemistry

Add on course On Soil & Water Testing

External Key Answer 2021 – 2022


Q. No.	Ans.	Q. No.	Ans	Q. No.	Ans	Q. No.	Ans	Q. No.	Ans	Q. No.	Ans
1	a	11	d	21	d	31	b	41	c	51	c
2	c	12	d	22	b	32	c	42	d	52	a
3	a	13	b	23	b	33	b	43	a	53	b
4	b	14	b	24	b	34	a	44	b	54	a
5	b	15	b	25	a	35	a	45	a	55	c
6	d	16	a	26	a	36	c	46	b	56	a
7	b	17	b	27	a	37	b	47	a	57	c
8	c	18	c	28	b	38	b	48	c	58	d
9	d	19	b	29	a	39	a	49	d	59	b
10	b	20	b	30	c	40	b	50	a	60	a

K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course "on soil and water testing

Marks List- 2022

Sl.No	Name of the student	External Marks
1	Revansidda	52
2	Gopal	53
3	Veershetty	50
4	Radhika	51
5	Praveen Sadashiv	59
6	Akash	55
7	Syed Lukman	Ab
8	Rajeshwari	44
9	Pavan	44
10	Jyoti	52
11	Rani	49
12	Nameera Qurrat	50
13	Shweta	Ab
14	Vishal	57
15	Vishwajeet	32
16	Praveen Biradar	40
17	Ramkumar	55
18	Neha Anjum	50
19	M Vivek	29
20	Anand	50
21	Umesh	48
22	MD Ismail Shah	47
23	SaikiranReddy	30
24	Sudeep	39

  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Comm. College,  
B I D A R - 585 401

  
Principal  
PRINCIPAL  
Karnataka Arts Sci. & Com. College  
BIDAR-585401




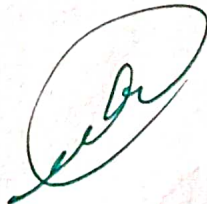
K.R.E.Society's  
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1	Revansidda	20	19	52	91
2	Gopal	18	19	53	90
3	Veershetty	14	17	50	81
4	Radhika	18	18	51	87
5	Praveen Sadashiv	16	15	59	90
6	Akash	20	19	55	94
7	Syed Lukman	Ab	Ab	Ab	Ab
8	Rajeshwari	18	19	44	81
9	Pavan	17	16	44	77
10	Jyoti	18	18	52	88
11	Rani	18	17	49	84
12	Nameera Qurrat	14	15	50	79
13	Shweta	Ab	Ab	Ab	Ab
14	Vishal	17	18	51	86
15	Vishwajeet	19	16	32	67
16	Praveen Biradar	14	17	40	71
17	Ramkumar	18	19	55	92
18	Neha Anjum	18	19	50	87
19	M Vivek	15	12	29	56
20	Anand	17	17	50	84
21	Umesh	18	19	48	85
22	MD Ismail Shah	11	10	47	68
23	SaikiranReddy	12	13	30	65
24	Sudeep	18	18	39	75

  
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**Chemistry Department**  
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**BIDAR-585401**

K.R.E.Society's  
Karnatak Arts, Science & Commerce College, Bidar.  
Department of Chemistry

"Add on Course "on Soil and Water testing

Report


Name of the Course : Soil and Water Testing

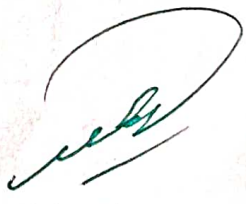
Name of the Department : Chemistry

Duration : 30 hrs

Number of Students : 24

Department of Chemistry conducted Add- on course on Soil and Water Testing. This course helps students to improve working ability in analytical laboratory. This helps to gain knowledge and equip the students with tools and techniques . This scientific inquiry tend to understand the status of soil and water resources which is important for agriculture . At the end of term we have conducted examination and issued certificates.

  
HOD  
Head of the  
Chemistry Department  
Karnatak Arts, Sc. & Com. College,  
BIDAR - 585 401

  
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