



GOVERNMENT DEGREE COLLEGE-NAIDUPET

SPSR NELLORE DIST, ANDHRA PRADESH-524126



ADD ON PROGRAMME
(Value Addition Programme)

WATER ANALYSIS

Department of Chemistry

2021-22



Date: 8/11/21

From

The Department of Chemistry

Government Degree College

Naidupet

To

The Principal

Government Degree College

Naidupet

Sir

Sub: Department of Chemistry – permission seeking to conduct add on course on “Water Analysis”–Regarding.

I would like to submit that the Department of Chemistry has planned to organize an add on certificate course for III year students from the academic year 2021-22 onwards.

At this juncture we request your honour to permit the department to organize the above requested Add on certificate course instantly

This is for your favourable consent

Thanking you sir

Yours sincerely



Dr P. Sujana

Department of Chemistry



GOVERNMENT DEGREE COLLEGE-NAIDUPET

SPSR NELLORE DIST, ANDHRA PRADESH-524126



Circular

Date: 09/11/2021

All the III year BSC students are here by instructed that, the Department of Chemistry is going to start an "Add on Certificate Course" for BSC students in "Water Analysis" from this academic year onwards.

So, interested students are directed to contact Dr P. Sujana, Lecturer in Chemistry and register for the course.

III BSC ---

P. Sujana

Principal

PRINCIPAL

Govt. Degree College
NAIDUPET, SPSR Nellore Dt

CHEMISTRY

Add-on- Programme

WATER ANALYSIS

Syllabus:

Unit-1

Source of water pollution and pollutants: introduction – principle factors – dissolved oxygen - Acidity and alkalinity – Trace elements – Microorganisms – Types of pollutants – Effects – Pathogens – Water related diseases and their causative organisms.

Unit-2

Mosquito Control: protection against water borne diseases -Mosquito borne diseases – Mosquito control – Destruction of larvae and pupae – Protection against mosquito bite.

Unit-3

Harvesting of rain water: Harvesting rainwater -by using the existing well – through pits – Decentralized percolation trenches – Various methods of traditional rainwater harvesting -Earthen reservoirs – tanks – ponds – rainwater harvesting through watershed management.

Unit-4

Quantities Analysis: Temperature -Ph – Turbidity – Total dissolved solids (TDS) Dissolved oxygen (DO) - Bio chemical oxygen demand (BOD) total phosphate test – total nitrogen test – microorganisms - Heavy metals.

PRACTICALS

- Determination of pH in various water samples.
- Estimation of following ions present in various sample chlorides, calcium, magnesium and Iron



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Water Analysis

Learning Outcomes:

1. Learn the procedure for the estimation of total hardness of water
2. Learn calculation of PH and turbidity of water
3. Estimate the COD and BOD
4. Learn the procedure for the estimation TDS

Pupils Attendance Register

వేల సంవత్సరము 2021 - 2022

సం. పాఠకులు	పేరు	తేదీలు												
		15.11.21	16.11.21	17.11.21	18.11.21	19.11.21	20.11.21	21.11.21	22.11.21	23.11.21	24.11.21	25.11.21	26.11.21	27.11.21
1	K. Bharathi	/	/	/	/	/	/	/	/	/	/	/	/	/
2	K. Vennela	/	/	/	/	/	/	/	/	/	/	/	/	/
3	K. Sumanthi	/	/	/	/	/	/	/	/	/	/	/	/	/
4	K. Vimala	/	/	/	/	/	/	/	/	/	/	/	/	/
5	N. Rajesh	/	/	/	/	/	/	/	/	/	/	/	/	/
6	R. Venkateswarlu	/	/	/	/	/	/	/	/	/	/	/	/	/
7	A. Maunika	/	/	/	/	/	/	/	/	/	/	/	/	/
8	D. Somasekhara	/	/	/	/	/	/	/	/	/	/	/	/	/
9	E. Akhila	/	/	/	/	/	/	/	/	/	/	/	/	/
10	G. Subhashini	/	/	/	/	/	/	/	/	/	/	/	/	/
11	K. Saikumar	/	/	/	/	/	/	/	/	/	/	/	/	/
12	K. Dileep Kumar	/	/	/	/	/	/	/	/	/	/	/	/	/
13	K. Bharu Prasad	/	/	/	/	/	/	/	/	/	/	/	/	/
14	K. Samateja	/	/	/	/	/	/	/	/	/	/	/	/	/
15	M. Narayanamma	/	/	/	/	/	/	/	/	/	/	/	/	/
16	K. Lakshmi Prasanna	/	/	/	/	/	/	/	/	/	/	/	/	/
17	Y. Devendra Kumar	/	/	/	/	/	/	/	/	/	/	/	/	/

Registration
Introduction
Microorganisms
Principle factor
Collection of water samples
Disturbance of larvae, pupae
- do -
Rain water Harvesting
collection of different samples
types of pollutants
water related diseases
explanation of DO
Mussquito borne diseases

ఉదయం హాజరు : బాలురు బాలికలు
 ఉపాధ్యాయుని సంతకం
 సాయంత్రం హాజరు : బాలురు బాలికలు
 ఉపాధ్యాయుని సంతకం

పిల్లల హాజరు పట్టిక

తేదీలు సంవత్సరము 2021 - 2022
 పాఠకులు పేరులు

సం. పాఠకులు	పేరు	తేదీలు												
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6	R. Venkateswarlu	/	/	/	/	/	/	/	/	/	/	/	/	/
7	A. Maunika	/	/	/	/	/	/	/	/	/	/	/	/	/
8	D. Somasekhara	/	/	/	/	/	/	/	/	/	/	/	/	/
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11	K. Saikumar	/	/	/	/	/	/	/	/	/	/	/	/	/
12	K. Dileep Kumar	/	/	/	/	/	/	/	/	/	/	/	/	/
13	K. Bharu Prasad	/	/	/	/	/	/	/	/	/	/	/	/	/
14	K. Samateja	/	/	/	/	/	/	/	/	/	/	/	/	/
15	M. Narayanamma	/	/	/	/	/	/	/	/	/	/	/	/	/
16	K. Lakshmi Prasanna	/	/	/	/	/	/	/	/	/	/	/	/	/
17	Y. Devendra Kumar	/	/	/	/	/	/	/	/	/	/	/	/	/

Protection & control measure
 Various methods of water supply
 - do -
 TDS, DO, COD, BOD.
 Calculation
 salinity
 determination of pH
 TDS plant in water
 Determine the salinity of water.
 TDS plant in water

Head
 DEPARTMENT OF CHEMISTRY
 Govt Degree College
 NAIDUPEET, Nellore DL

PRINCIPAL
 Govt Degree College
 NAIDUPEET, Nellore DL

Addon Programme

Examination

26
30

Fill in the blanks

1. Hardness of water is due to presence of Calcium salts.
2. Color of silver chloride is Reddish Brown
3. Diarrheais caused due to presence of Giaria organisms
4. Desirable do level of natural water is 7 Ppm
5. Expand the term BOD biological
6. Hardness of water is due to presence of Calcium salts.
7. ∅ Is an indicator used in estimation of Ca^{+2} ion.
8. Source of water pollution are discharge of domestic.
9. Nessler's reagent is made up off $Hg + I_2$
10. Color of silver chromate is Reddish Brown

Answer the following Questions

11. What is total Dissolve solids?
12. What is meant for BOD?
13. Name some microorganisms present in water?
14. What are the trace elements?
15. What are the traditional water harvesting?
16. What are the method used to recharge the ground water?
17. Give and example of Heavy metals?
18. How to calculate the Ca^{+2} ion presence in water?
19. Give some examples of water pollutions?
20. Explain TDS and Nitrogen test?

Addon Programme

Examination

20
30

Fill in the blanks

1. Hardness of water is due to presence of 5.9 X salts.
2. Color of silver chloride is white X
3. Diarrheais caused due to presence of Red ish X organisms
4. Desirable do level of natural water is 7ppm ✓
5. Expand the term BOD biological X
6. Hardness of water is due to presence of caluciam ✓ salts.
7. p Is an indicator used in estimation of Ca^{+2} ion.
8. Source of water pollution are dischango ✓ of domestic.
9. Nessler's reagent is made up off Hg⁺ I₂ ✓
10. Color of silver chromate is Redish Brown ✓

Answer the following Questions

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19. Give some examples of water pollutions?
20. Explain TDS and Nitrogen test?

Addon Programme

Examination

25
30

Fill in the blanks

1. Hardness of water is due to presence of Calcium salts.
2. Color of silver chloride is White.
3. Diarrheais caused due to presence of Giardia organisms
4. Desirable do level of natural water is 7ppm
5. Expand the term BOD biological
6. Hardness of water is due to presence of calcium salts.
7. EBT is an indicator used in estimation of Ca^{+2} ion.
8. Source of water pollution are Discharge of domestic.
9. Nessler's reagent is made up off Hg⁺I₂
10. Color of silver chromate is Redish brown

Answer the following Questions

11. What is total Dissolve solids?
12. What is meant for BOD?
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20. Explain TDS and Nitrogen test?

Addon Programme

22/3/22

Examination30
30Fill in the blanks

1. Hardness of water is due to presence of Calcium salts.
2. Color of silver chloride is white
3. Diarrheais caused due to presence of Gioria organisms
4. Desirable do level of natural water is 7 PPM
5. Expand the term BOD Biochemical oxygen demand
6. Hardness of water is due to presence of Calcium salts.
7. Eriochrome Black T Is an indicator used in estimation of Ca^{+2} ion.
8. Source of water pollution are Discharge of domestic.
9. Nessler's reagent is made up off Hg⁺ I₂
10. Color of silver chromate is Redish Brown

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SPSR NELLORE DIST, ANDHRA PRADESH-524126



Evaluation

The Course syllabus and evaluation pattern are decided by the department and approved by the principal. The evaluation is done by the department itself. That is internal evaluation. Examinations are conducted and the final evaluation is done by awarding grades. Each qualified student is awarded with a certificate. The awarding of grades is in the following pattern,

Grade A-more than 75%


Grade B- from 60% to 75%


Grade C- from 50% to 60%

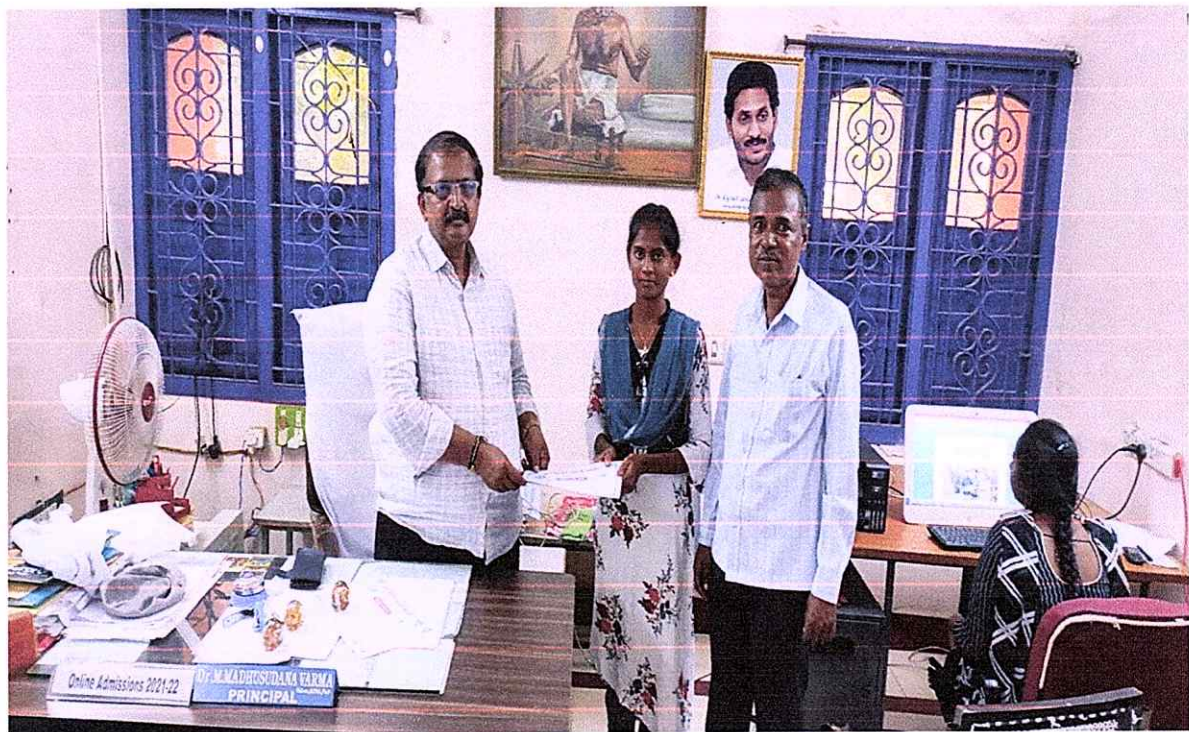
Grade D- not qualified

Evaluation

SNo	Name of the Student	Grade	Result(P/F)
1	K. Bharathi	B	P
2	K. Vennela	B	P
3	K. Sumathi	A	P
4	K. Vimala	B	P
5	N. Rajesh	D	F
6	R. Venkateswarlu	A	P
7	A.Mounika	B	P
8	B. Somasekhar	C	P
9	F. Akhila	A	P
10	G. Subhashini	B	P
11	K. Sai Kumar	B	P
12	K. Dileep Kumar	C	P
13	K. Bhanu Prasad	A	P
14	K. Soma Teja	B	P
15	M. Narayanamma	B	P
16	K. Lakshmi Prasanna	B	P
17	Y. Devendra Kumar	D	F

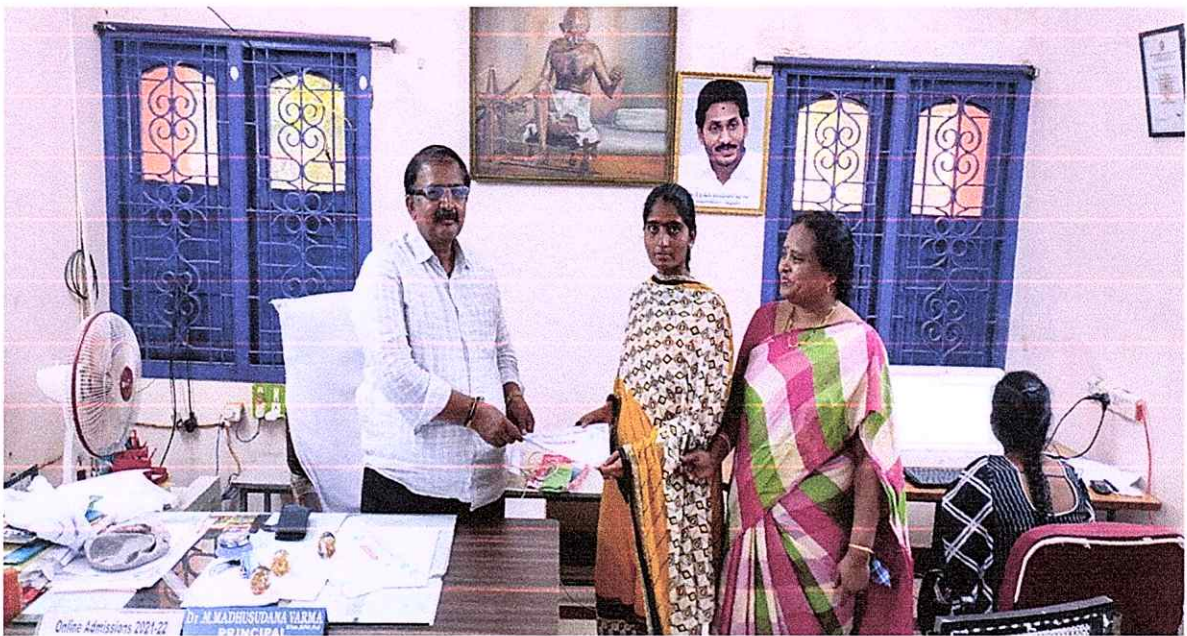

Organizing secretary
(Dr. P. Sujana)


Principal
PRINCIPAL
Govt. Degree College
LUPET, RPSR Nellore



[Handwritten Signature]
Head
DEPARTMENT OF COMMUNITY
Govt Degree College
NAIDUPET, SPSR Nellore Dt

[Handwritten Signature]
PRINCIPAL
Govt. Degree College
NAIDUPET, SPSR Nellore Dt



Dr. Almahesudama Varma
Head
DEPARTMENT OF CHEMISTRY
Govt. Degree College
NAIDUPET, SPSR Nellore Dt

Dr. Almahesudama Varma
PRINCIPAL
Govt. Degree College
NAIDUPET, SPSR Nellore Dt

GOVT. DEGREE COLLEGE, NAIDUPET

(Re accredited with 'B' Grade by NAAC)

SPSR Nellore Dist., A.P.



CERTIFICATE

This is to Certify that Mr/Kum.....*F. Akhila*.....
of.....*III B.Sc. (MBC)*.....has attended the Add on programme on
.....*Water Analysis*.....Conducted by the Dept. of.....*Chemistry*.....
during the academic year *2021 - 2022* and Qualified with Grade.....*A*.....

Convener

DEPARTMENT OF CHEMISTRY
Govt. Degree College
NAIDUPET, SPSR Nellore Dt

Principal

PRINCIPAL
Govt. Degree College
NAIDUPET, SPSR Nellore Dt