



**GOVT. DEGREE COLLEGE FOR MEN, SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



---

**DEPARTMENT OF CHEMICAL SCIENCES**

**CERTIFICATE COURSE ON**

**“DRINKING WATER ANALYSIS” -**

**(2018-19)**

---

**GOVT. DEGREE COLLEGE FOR MEN, SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**  
**(CHEMISTRY & INDUSTRIAL CHEMISTRY)**

**MINUTES OF THE MEETING**

Date: 15-09-2018

The departmental staff is held on 15-09-2018 at 4 PM in the department staff room chaired by Sri R. Ramesh Naidu, in-charge, Department of Chemical Sciences to discuss the following agenda.

Agenda:

1. To organize certificate course for the academic year 2018-19.
2. Coverage of syllabus (theory/ practical).
3. To conduct student seminars.

It is unanimously resolved to organize a certificate course on "DRINKING WATER ANALYSIS" for the students of III B.Sc. (M.C.Ic) for the academic year 2018-19. Sri B. Satish Kumar, Lecturer in Chemistry nominated as Course Coordinator.

Members present:

1. Sri R. Ramesh Naidu, in-charge
2. Sri B. Satish Kumar,
3. Dr. S. Rama Krishna
4. R. Venkateswara Rao
5. VSVS Satyanaryana



Date : 17-09-2018

From

Sri R. Ramesh Naidu,  
In-charge,  
Department of Chemical Sciences, Govt.  
Degree College for Men, Srikakulam.

To

The Principal,  
Govt. Degree College for Men, Srikakulam.

Respected Sir/Madam

Sub:- Department of Chemical Sciences – seeking permission to organize certificate course for the academic year 2018-19 – Request – Reg.

As per the resolutions taken in the departmental staff meeting, dated 15-09-2018, we are willing to organize a certificate course on “DRINKING WATER ANALYSIS” for the academic year 2018-19 with the duration of 30 days for III B.Sc. (M.C.Ic) students. Hence, I request you to give permission to organize the certificate course.

Thanking you,

Yours faithfully,



(R. RAMESH NAIDU)

Lecturer in-charge  
Dept. of Chemistry  
Govt. Degree & P.G. College (Men)  
SRIKAKULAM

**GOVT. DEGREE COLLEGE FOR MEN, SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**  
**(CHEMISTRY & INDUSTRIAL CHEMISTRY)**

**CIRCULAR**

Date: 18-09-2018

III B.Sc Chemistry students are informed that the class work (theory/ practical) of certificate course on “ DRINKING WATER ANALYSIS” will be commenced from 20-09-2018. The students (III M.C.Ic) who have interest to join in the certificate course shall give their names to the Course Coordinator Sri B. Satish Kumar, Lecturer in Chemistry on or before 20-09-2018.

90% of attendance is compulsory for the completion of the course and certificates will be given based on their performance. The duration of the course is 30 days only.



(R. RAMESH NAIDU)

Lecturer in-charge  
Dept. of Chemistry  
Govt. Degree & P.G. College (Men)  
SRIKAKULAM

M.C.Ic

  
15/09/18

**GOVT. DEGREE COLLEGE FOR MEN, SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**  
**(CHEMISTRY & INDUSTRIAL CHEMISTRY)**

**BROCHURE (2018-19)**

**Name of the** Certificate course: DRINKING WATER ANALYSIS

**OBJECTIVES:**

1. Enable students to develop laboratory skills.
2. To impart knowledge on methods of Drinking Water Analysis.
3. To create interest among students to work in pharmaceutical industries.

**Syllabus:**

Instrumentation.

1. Conductometry
2. Flame photometry
3. Spectrophotometry

**Analysis parameters of Drinking Water**

1. Colour
2. Turbidity
3. Odour and Taste
4. Hardness
5. pH value
6. Acidity and Alkalinity
7. Total dissolved solids
8. Total chlorides and sulphates
9. COD and BOD
10. Supplementary tests- conductivity, qualitative tests for Lead, Cyanide, Mercury, Cadmium etc.

### Reference Books

1. Vogel's Quantitative Chemical Analysis.
2. A Test book on Experiments and Calculation in Engineering Chemistry by S.S.Dara

Course Coordinator: Sri B. Satish Kumar, Lecturer in Chemistry

### Instructions to the Candidates:

1. Duration of the course – 30 days
2. Course Fee – NIL (Free)
3. 90% of attendance is compulsory for the completion of the course.
4. Certificates will be issued to the students based on their performance.

### Resource Persons:

1. Sri R. Ramesh Naidu, in-charge



2. Sri B. Satish Kumar,



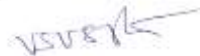
3. Dr. S. Rama Krishna



4. R. Venkateswara Rao



5. VSVS Satyanaryana



GOVT. DEGREE COLLEGE FOR MEN, SRIKAKULAM  
DEPARTMENT OF CHEMICAL SCIENCES  
CERTIFICATE COURSE ON "DRINKING WATER ANALYSIS" – 2018-19  
Registration / Enrolment list

S.No	Name of the Student	Group	Signature
1.	A. SANTOSH	III B.Sc. (MCIC)	A. Santosh
2.	B. GANESH	III B.Sc. (MCIC)	B. Ganesh
3	B. SYAM SUNDERA RAO	III B.Sc. (MCIC)	B. Syam sundera Rao
4	CH. VENU	III B.Sc. (MCIC)	CH. Venu
5	CH. DHARMA RAJU	III B.Sc. (MCIC)	CH. Dharma Raju
6	G. NEELAM NAIDU	III B.Sc. (MCIC)	G. Neelam Naidu
7	K. HARI	III B.Sc. (MCIC)	K. HARI
8	K. SANTOSH KUMAR	III B.Sc. (MCIC)	K. Santosh Kumar
9	L. TIRUPATHI RAO	III B.Sc. (MCIC)	L. Tirupathi Rao.
10	P. SURYA RAO	III B.Sc. (MCIC)	P. Surya Rao.
11	G. SAI RAM	III B.Sc. (MCIC)	G. Sai Ram.
12	G. AJIT	III B.Sc. (MCIC)	G. AJIT
13	G. CHANTI BABU	III B.Sc. (MCIC)	G. Chanti Babu
14	L. RAJESH KHANNA	III B.Sc. (MCIC)	L. Rajesh Khanna
15	P. SAIKIRAN	III B.Sc. (MCIC)	P. Saikiran.
16	P. RAMA RAO	III B.Sc. (MCIC)	P. Rama Rao.
17	R. VENKATESH	III B.Sc. (MCIC)	R. Venkatesh
18	S. ESWARA RAO	III B.Sc. (MCIC)	P. Venkatesh. ..
19	S. RAMESH	III B.Sc. (MCIC)	S. Ramesh
20	V. PAPA RAO	III B.Sc. (MCIC)	V. Paparao



పెల్లల హాజరుపట్టి

एन.डी.ए. २०००

## PHOTO GALLERY







**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**  
**CERTIFICATE COURSE ON “DRINKING WATER ANALYSIS”-2018-19**  
**QUESTION PAPER**

**Time: 3 hours**

**Max Marks: 50 M**

1. Determine the temporary, permanent and total hardness of given 1 litre of water sample?

OR

2. Determine COD and total chlorides of a given 1 litre of water sample?

**GOVERNMENT DEGREE COLLEGE (MEN), SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**  
**FEEDBACK FORM**  
**CERTIFICATE COURSE ON**  
**(DRINKING WATER ANALYSIS)**

- |   |   |   |
|---|---|---|
| 1. Name of the Student                          | : | Gi. Sairam  |
| 2. Class  | : | III BSc (MCIC)  |
| 3. Did the Course fulfil its objectives         | : | Yes   |
| 4. Were the concepts explained in<br>The course | : | yes   |
| 5. How useful the course for you :              |   | I can analyse drinky<br>water samples in<br>various places. |
| 6. Overall Rating of the course                 | : | Excellent.  |
| 7. Suggestion if any                            | : | nil   |
| 8. Signature of the Student                     | : | G. Sairam   |

GOVERNMENT DEGREE COLLEGE (MEN), SRIKAKULAM

DEPARTMENT OF CHEMICAL SCIENCES

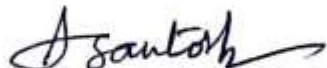
FEEDBACK FORM

CERTIFICATE COURSE ON  
(DRINKING WATER ANALYSIS)

1. Name of the Student : Ch. Venu
2. Class : PH BSc (MSc)
3. Did the Course fulfil its objectives : Yes
4. Were the concepts explained in  
The course : Yes
5. How useful the course for you : Got interest to work  
in pharmaceutical  
industries.
6. Overall Rating of the course : Very good
7. Suggestion if any : Nil

8. Signature of the Student : Ch Venu

**GOVERNMENT DEGREE COLLEGE (MEN), SRIKAKULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**  
**FEEDBACK FORM**  
**CERTIFICATE COURSE ON**  
**(DRINKING WATER ANALYSIS)**

1. Name of the Student : A. Santosh.
2. Class : III. BSc mCIC
3. Did the Course fulfil its objectives : yes
4. Were the concepts explained in  
The course : yes
5. How useful the course for you : I ~~know~~ understood how  
water samples can be analysed.
6. Overall Rating of the course : very good.
7. Suggestion if any : Better to learn  
more parameters to  
be analysed.
8. Signature of the Student : 

GOVERNMENT DEGREE COLLEGE (MEN), SRIKAKULAM

DEPARTMENT OF CHEMICAL SCIENCES

FEEDBACK FORM

CERTIFICATE COURSE ON  
(DRINKING WATER ANALYSIS)

1. Name of the Student : P. Sai Kiran
2. Class : III BSc (MCIC)
3. Did the Course fulfil its objectives : Yes
4. Were the concepts explained in  
The course : Yes
5. How useful the course for you : Improved Laboratory  
techniques.
6. Overall Rating of the course : Excellent
7. Suggestion if any : NIL
  
8. Signature of the Student : P. Sai Kiran





**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. A. SANTOSH of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. B. GANESH of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*"DRINKING WATER ANALYSIS"*

**This is Certify that Mr./ Kum. B. SYAM SUNDARA RAO of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on "DRINKING WATER ANALYSIS" organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with 'A' Grade.**

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. CH. VENU of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘B’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. CH. DHARMA RAJU of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. **G. NEELAM NAIDU** of **III B.Sc. (M.C.Ic)** got registered himself/herself for the Certificate Course on “**DRINKING WATER ANALYSIS**” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. K. HARI of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘B’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. K. SANTOSH KUMAR of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal





**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. L. TIRUPATHI RAO of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. P. SURYA RAO of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. G. SAI RAM of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. G. AJIT of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘B’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. G. CHANTI BABU of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. L. RAJESH KHANNA of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. P. SAI KIRAN of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘B’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. P. RAMA RAO of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal





**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. R. VENKATESH of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. S. ESWARA RAO of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. S. RAMESH of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal



**GOVERNMENT DEGREE COLLEGE FOR MEN, SRIKAULAM**  
**DEPARTMENT OF CHEMICAL SCIENCES**



*CERTIFICATE COURSE ON*  
*“DRINKING WATER ANALYSIS”*

This is Certify that Mr./ Kum. V. PAPA RAO of III B.Sc. (M.C.Ic) got registered himself/herself for the Certificate Course on “DRINKING WATER ANALYSIS” organized by the Department of Chemical Sciences and completed the course during the period from 20-09-2018 to 20-11-2018 (for 30 days). His/ Her performance is credited with ‘A’ Grade.

Head of the Department

Principal