Government Degree College Shadnagar
Rangareddy district, Telangana
Department of chemistry

Circular

Date: 31-01-2022

All the students, teaching staff are hereby informed that the chemistry department is going to organize "**A CERTIFICATE COURSEON WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS "for a period of 30 hours for the academic year 2021-22** . classes will conduct on zero hours that is from 4.00 pm-5.00 pm. Interested Students are asked to give their names to Dr M.Sriltha Asst.prof of chemistry on or before 02-02-2022

PRINCIPAL
Govt. Degree College
Shadnagar.
Ranga Reddy Dist.

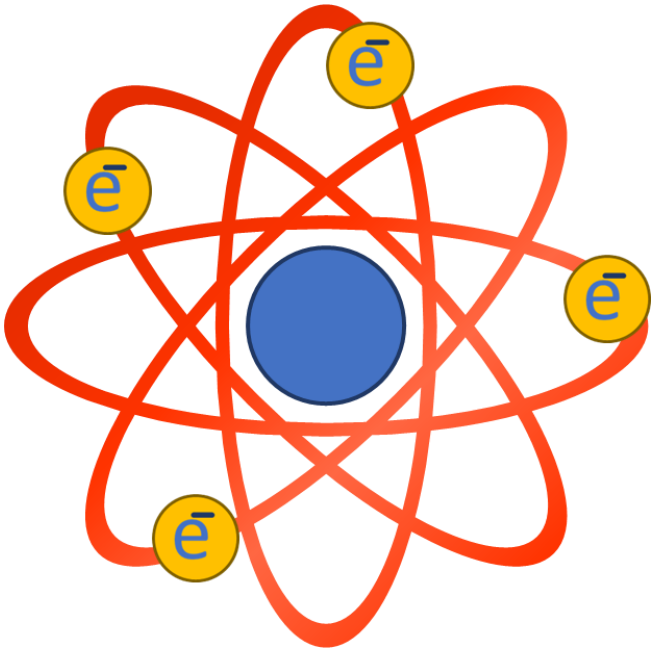
Principal

GOVT. DEGREE COLLEGE, SHADNAGAR

Ranga Reddy – Dist

DEPARTMENT OF CHEMISTRY

Academic year 2021-22



Certificate Course

Certificate Course on Water Analysis and Preventive Measures ForWater Borne Diseases In Rural Area

No of hours:30

No of students attended:11 time :4-5 pm

CERTIFICATE COURSE ON WATER ANALYSIS AND PREVENTIVE MEASURESFOR WATER BORNE DISEASES IN RURAL AREAS

SYLLABUS OF THE COURSE

1. *Sources of water: Fresh water sources, Ground water sources, Saline water sources.*
2. *Types of water: Saline water, Fresh water, Potable water, types of hardness; Temporary and Permanent hardness.*
3. *Hard water treatment: Clarke's method, Soda lime method, permutit method, ion exchange method.*
4. *Municipal water treatment.*
5. *Virtual water: Blue water, Green water, Gray water.*
6. *Composition of Water: Physico-chemical parameters of potable water ; Reference standard .*
7. *Water analysis: Practical Approach.*
8. *Water borne diseases: Pathology, Mortality rates in rural areas, epidemiology out breaks, preventive measures and treatment.*
9. *Water sheds-Rain water harvesting.*
10. *Rural water supply (RWS).*

PRINCIPAL
Govt. Degree College
Shadnagar.
Ranga Reddy Dist.

P

CERTIFICATE COURSE ON "WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS"

This course is mainly designed to fulfill the contemporary and local needs. it is impossible to keep apart water from nature or life. Water is the key ingredient of our ecosystem. This course is not only for knowledge enhancement but also for sustainable development of environment and healthy attitude of the individual. Water is an essential part of life, and every one of us should have minimum knowledge for proper and safe consumption of drinking water which will avoid 90% of diseases. This course is not for commercial aspect but to create awareness among the students about the safe about the safe consumption of potable water and preventing the seasonal water borne diseases in rural areas where this problem is predominant.

OBJECTIVES OF THE COURSE:

1. *To study the sources of water: Fresh water sources, Ground water sources, Saline water sources.*
2. *To study the types of water: Saline water, Fresh water, Potable water, types of hardness; Temporary and Permanent hardness.*
3. *To study the hard water treatment: Clarke's method, Soda lime method, permutit method, ion exchange method.*
4. *To study the municipal water treatment.*
5. *To study the concept of virtual water: Blue water, Green water, Gray water.*
6. *To study the physico-chemical parameters of potable water ; Reference standard .*
7. *To study the water analysis practically.*
8. *To study the water borne diseases: Pathology, Mortality rates in rural areas, epidemiology out breaks, preventive measures and treatment.*
9. *To study the Concept of water sheds, benefits – virtue of rain water harvesting.*
10. *To study the rural water supply (RWS).*

CERTIFICATE COURSE ON WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS

Students attended for certificate course

S.No.	NAME	CLASS	ROLL NO.
1	K. Shireesha	III Yr	19033067445001
2	G. Prema Latha	III Yr	19033067445504
3	K.Anitha	III Yr	19033067445505
4	K. Divya	III Yr	19033067445508
5	M. Navaneetha	III Yr	19033067445516
6	S.Swathi	III Yr	19033067445519
7	Y. Neeraja	III Yr	19033067445521
8	N. Sindhuja	III Yr	19033067445002
9	M.Srikanth	III Yr	19033067441002
10	S.Rama Devi	III Yr	19033067441003
11	V.Shailaja	III Yr	'19033067441005

PRINCIPAL
Govt. Degree College
Shadnagar.

PHOTO CLIPPING OF CERTIFICATE COURSE ON WATER ANALYSIS AND PREVENTIVE

MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS

Water Analysis by Students of B.SC Final Year

CERTIFICATE COURSE ON WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS

REVIEW TEST

Name: ***Max.Marks: 30***

Roll No: ***Time: 45min***

---

1. The maximum desirable limit Bureau of Indian Standards (BIS) of lead in the drinking water is

   A. 0.05 mg/l

   B. 0.09 mg/l

   C. 0.1 mg/l

   D. 1.0 mg/l

2. Zeolite softening process removes

   A. only temporary hardness of water

   B. only permanent hardness of water

   C. both temporary and permanent hardness of water

   D. the dissolved gases in permanent hard water

3. Conventional tertiary treatment is

   A. chemical coagulation and flocculation

   B. Filtration

   C. Sedimentation

D. none of these

4. The maximum desirable limit (BIS) of total hardness (as $CaCo_3$) in drinking water is

A. 600 ppm

B. 300 ppm

C. 500 ppm

D. 1000 ppm

5. The chemical oxygen demand (COD)measures the

A. amount of oxygen required for growth of microorganisms in water

B. amount of oxygen that would be removed from the water in order to oxidize pollution

C. amount of oxygen required to oxidize the calcium present in waste water

D. none of the above

6. Hardness of water does not

A. have any bad effect in boiler

B. make cooking of foods difficult

C. make it unfit for drinking

D. cause difficulty in the washing of clothes with soaps

7. Permanent hard water may be softened by passing it through

A. sodium silicate

B. sodium bicarbonate

C. sodium hexametaphosphate

D. sodium phosphate

8. Zeolite used in zeolite softening process for the treatment of hard water gets exhausted after certain time of usage but can be regenerated by flushing it with

A. 10% calcium chloride solution

B. 10% magnesium sulfate solution

C. 10% magnesium chloride solution

D. 10% sodium chloride solution

9. Temporary hardness of water is caused by the presence of

A. chlorides of calcium and magnesium

B. sulfates of calcium and magnesium

C. bicarbonates of calcium and magnesium

D. carbonates of sodium and potassium

10. Secondary treatment uses_____to consume wastes.

A. micro-organisms

B. Chemicals

C. Filtration

D. none of these

11. Application of quaternary ammonium compounds as sanitizing agents tends to

A. favor gram positive bacteria

B. decrease gram positive bacteria

C. increase the percentage of gram(-)ve rods on utensils

D. none of the above

12. Permanent hardness of water is caused by the presence of

A. bicarbonates of calcium and magnesium

B. carbonates of sodium and potassium

C. chlorides and sulfates of calcium and magnesium

D. phosphates of sodium and potassium

13. According to BIS the maximum permissible limit of dissolved solids in drinking water is

A. 1000 mg/l

B. 500 mg/l

C. 2000 mg/l

D. 1500 mg/l

14. Acid used mostly for removal of milk stone is

A. phosphoric acid

B. nitric acid

C. gluconic acid

D. tartaric acid

15. Which of the following chemical is sometime added in the process of coagulation and flocculation?

A. Aluminum sulphate

B. Aluminum oxide

C. Calcium chloride

D. None of these

16. Which of the following physical method is used as germicidal in modern time for the treatment of drinking water?

A. Chlorination

B. Treating with potassium permagnate

C. UV radiation

D. Treating with bleaching powder

---

17. Sanitizer used specifically for vitreous enamel are

A. strong alkalis

B. strong acids

C. weak alkali with sodium silicate

D. none of these

---

18. The common methods used for disinfection in waste water treatment plants are

A. Chlorination

B. UV light

C. both (a) and (b)

D. Phenolic solvent

---

19. Inhibitors are used along with sanitizer to

A. improve their action

B. to prevent corrosion

C. both (a) and (b)

D. none of these

---

20. Sanitizers used for rubber made equipments are

A. strong acids

B. strong alkalis

C. combination of both

D. none of these

21. Volume of rain water evaporated during the production process.

A. Green water

B. strong water

C. Blue water

D. none of these

22. Volume of Surface water / Ground water evaporated as a result of production of the produce.

A. Green water

B. Grey water

C. Blue water

D. none of these

23. Bacillus Dysentery caused by

A. Shigella dysenteriae

B. Mycobacterium tuberculae

C. Entamoebia histalytica

D. none of these

24. O.R.S. contains

A. Potassium, sodium, citrate, chloride, bicarbonate and glucose

B. Magnesium, sodium, sulphate and sugar

C. Potassium, sodium, nitrate, carbonate and fructose

D. none of these

25. Acute dysentery with blood and mucous in stool is due to

A. Amoebiasis

B. Jaundice

C. Thyphoid

D. Dengue

26. Ofloxacin is a drug is used for the treatment of_____

A. Amoebiasis

B. Jaundice

C. Thyphoid

D. Dengue

27. Which of the following is not a water borne disease?

A. Typhoid

B. Jaundice

C. Polio

D. Botulism

28. The major step should be taken for preventing the spread of water borne diseases

A. Stop the open defecation

B. Use the proper medication

C. Consumption of bottled drinking water

D. None of these

29. Hard water consumption causes_____in kidneys.

A. Calcium oxalate stones

B. Magnesium carbonate stones

C. Zinc sulphate stones

D. All of these

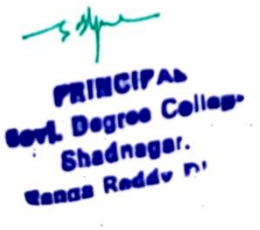
30. Which of the following present in potable water?

A. K^+

B. F^-

C. Al^{+3}

D. SO_4^{-2}



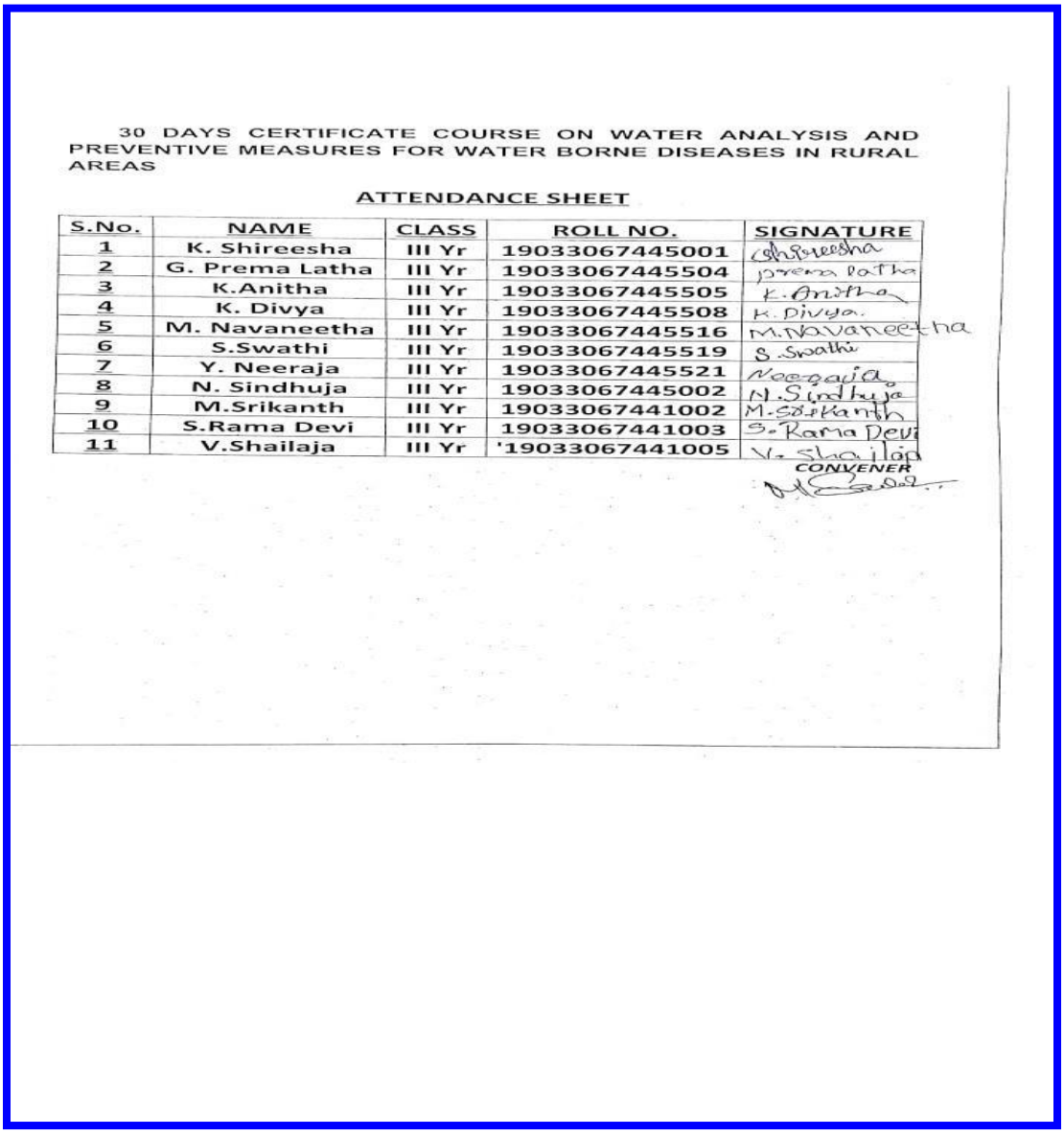
ALL THE BEST

CERTIFICATE OF

WATER ANALYSIS AND MEASURES FOR WATERBORN DISEASES IN RURAL AREAS

30 DAYS CERTIFICATE COURSE ON WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS

ATTENDANCE SHEET



30 DAYS CERTIFICATE COURSE ON WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS

ATTENDANCE SHEET

S.No.	NAME	CLASS	ROLL NO.	SIGNATURE
1	K. Shireesha	III Yr	19033067445001	
2	G. Prema Latha	III Yr	19033067445504	
3	K.Anitha	III Yr	19033067445505	
4	K. Divya	III Yr	19033067445508	
5	M. Navaneetha	III Yr	19033067445516	
6	S.Swathi	III Yr	19033067445519	
7	Y. Neeraja	III Yr	19033067445521	
8	N. Sindhuja	III Yr	19033067445002	
9	M.Srikanth	III Yr	19033067441002	
10	S.Rama Devi	III Yr	19033067441003	
11	V.Shailaja	III Yr	'19033067441005	

CONVENER

FEEDBACK ON CERTIFICATE PROGRAM

("WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS")

Tick (√) the appropriate option(s)

- **Why did you enroll in the programme**

◯ *General educational requirement*

◯ *General elective*

◯ *General necessity*

- **How did you find this programme**

◯ *Excellent*

◯ *Good*

◯ *Average*

- **Why did you find the lectures/training of the resource persons for this programme**

◯ *Excellent*

◯ *Good*

◯ *Average*

- **How did you find the lab/infrastructure facility provided**

◯ *Excellent*

◯ *Good*

◯ *Average*

- **How did the Department organize the programme**

◯ *Excellent*

◯ *Good*

◯ *Average*

- **How did you find the pace of the programme**

◯ *It was too fast*

◯ *It was manageable*

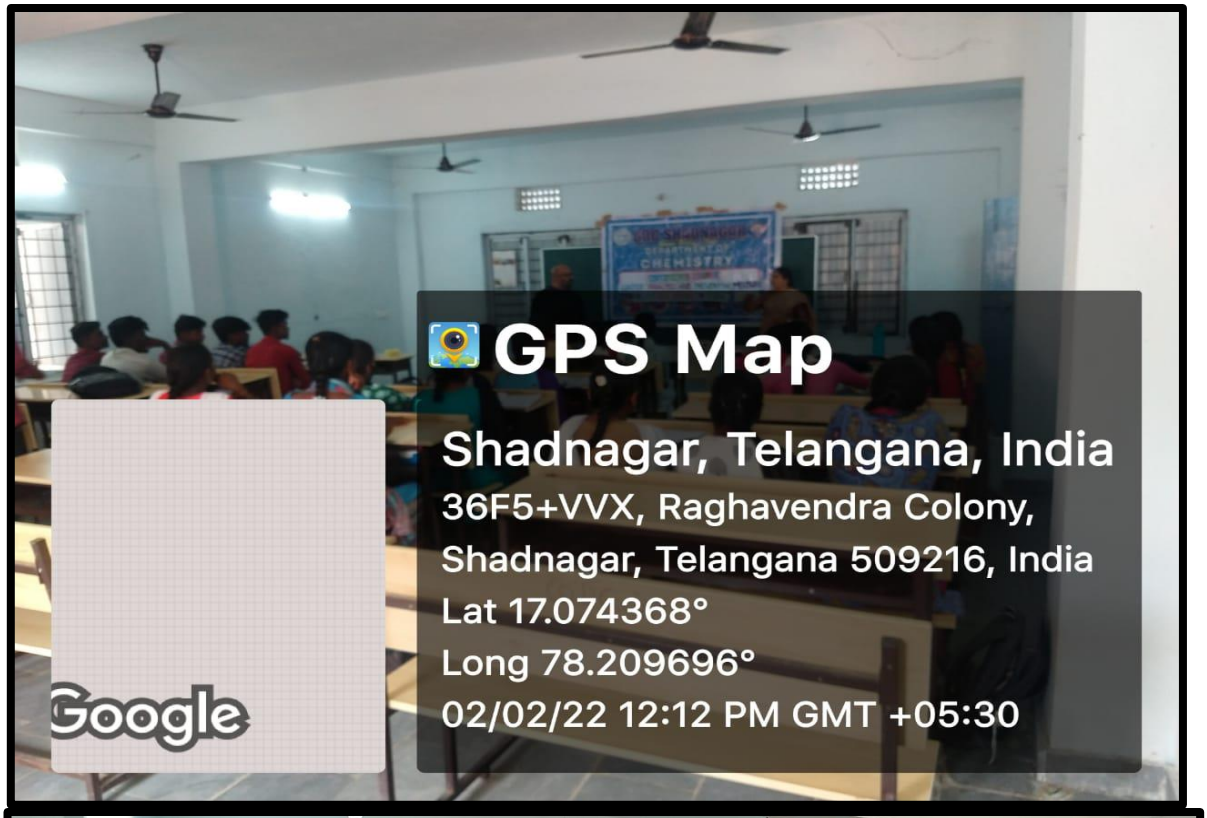
◯ *It was too slow*

My personal remarks :

Date :

Station :

THANK YOU



Certificate course inauguration by Principal,GDC-Shadnagar G.Bhanuprakash Garu

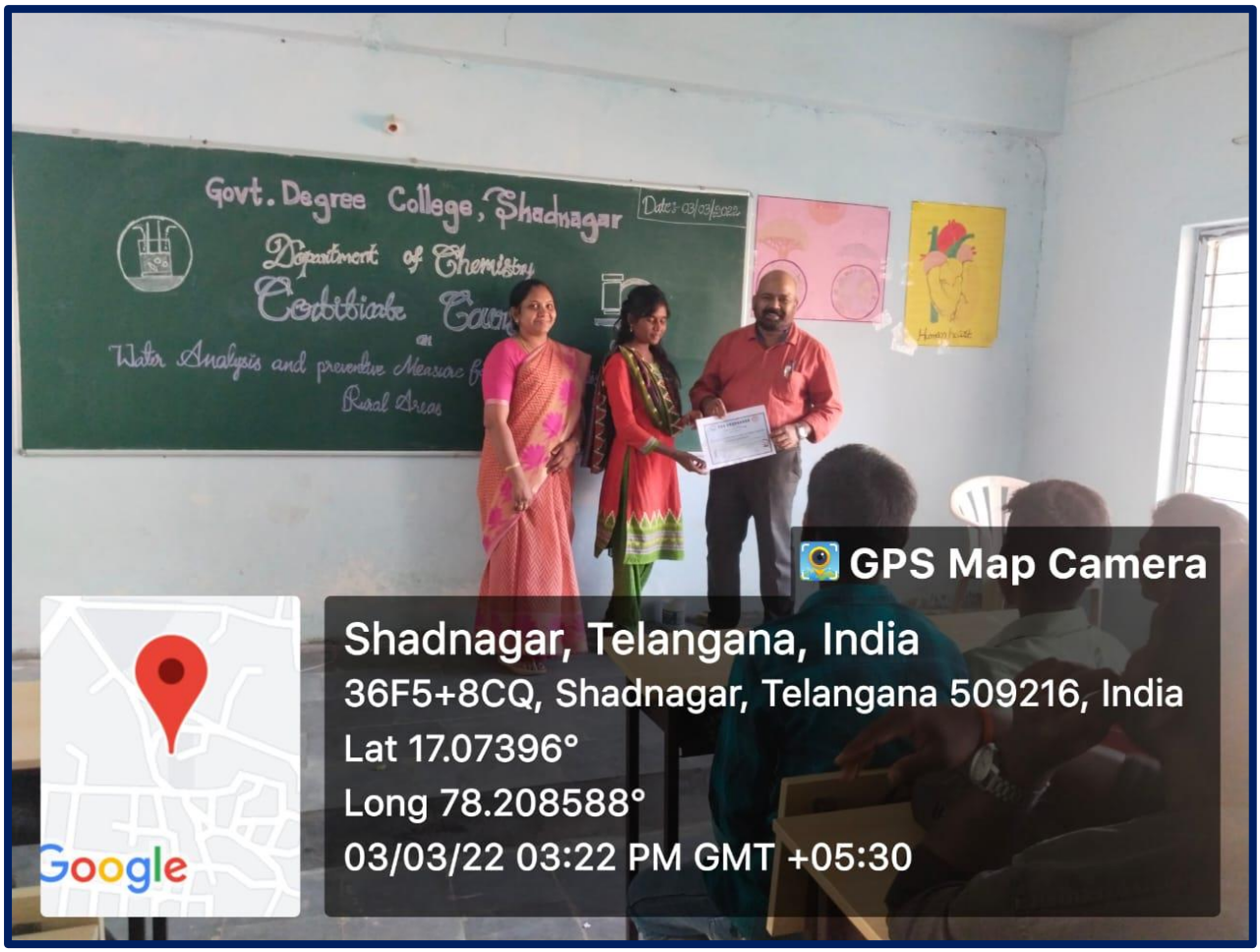


Photo clippings of Certificate distribution

Certificate course on WATER ANALYSIS AND PREVENTIVE MEASURES FOR WATER BORNE DISEASES IN RURAL AREAS

30hrs 2021-22

S.No.	NAME	2nd 2hr	3½ 2h	4½ 2h	7½ 2h	8½ 2h	9½ 3h	14½ 3h	15½ 3h	16½ 3h	17½ 3h	20½ 3h	21½
1	K. Shireesha	P	P	P	P	P	P	A	P	P	P	P	P
2	G.Prema Latha	P	P	P	P	P	P	P	P	A	P	P	P
3	K.Anitha	P	P	P	P	P	A	P	P	P	P	P	P
4	K. Divya	P	A	P	P	P	P	P	P	P	P	P	P
5	M. Navaneetha	P	P	P	A	P	P	P	P	P	P	P	P
6	S.Swathi	P	P	P	P	A	P	P	P	P	P	P	P
7	Y. Neeraja	P	P	A	P	P	P	P	P	P	P	P	P
8	N. Sindhuja	P	P	P	A	P	P	P	P	P	P	P	P
9	M.Srikanth	P	P	P	P	A	P	P	P	P	P	P	P
10	S.Rama Devi	P	P	P	P	P	P	A	P	P	P	P	P
11	V.Shailaja	P	P	P	A	P	P	P	P	P	P	P	P

Principal
GOVT. DEGREE COLLEGE
SHADNAGAR
Ranga Reddy Dist.