Dempo Charities Trust's

DHEMPE COLLEGE OF ARTS & SCIENCE

Miramar, Panaji-Goa

Determination of Physico-chemical and Microbiological parameters in drinking Water

CourseObjective:

To enable students to acquire knowledge and to estimate the different Physico-chemical and biological parameters in drinking water so as to determine whether water is hygienically safe and fit for consumption .Students are encouraged to bring water samples from their locality for analysis.

CourseContents:

1) Orientation course/ introduction to microbiological parameters of water.
1.1 Water quality of drinking water
1.2 Water quality standards
1.3 Study of E.coli, Pseudomonas aeroginasa,and Salmonella Typhimurium
1.4 Effect of micro-organisms on human health.
(1.1,1.2-1hr and 1.3,1.4-1hr)

2) Microbiological techniques (practicals)
2.1 Sterilization techniques-Autoclaving, drying of apparatus, making cotton plugs, Laminar air flow, traditional way b/w burner—6 hrs
2.2 Preparation of nutrient broth, Agars-control and samples----7 hrs
2.3 Inoculation of sample, incubation time and detection of presence---8 hrs

3)Introduction to chemical parameters of water:
3.1 Sources of water supply
3.2 Water standards for domestic use-physical characteristics such as turbidity, colour, and odour.
3.3 Chemical characteristics such as pH, chlorides, hardness, phosphates, nitrates, total dissolved solids ,DO, total Fe content, Acidity, Alkalinity, sulphates, free CO2 ,electrical conductivity.
3.4 Aspects of water pollution.
3.5 Treatment of water for domestic use.
(3.1, 3.2, 3.3--------1 hr and 3.4, 3.5-1 hr)

4) Chemistry practicals:
4.1 –Determination of colour, odour, taste, pH, turbidity and total dissolved solids—2 hrs
4.2 Total Acidity, total Alkalinity, chlorides and free CO2—2 hrs
4.3 Total hardness, calcium content, sulphates and nitrates —2 hrs
4.4Total Fe content, total phosphorous —2 hrs

Course outcome: Students after completing this course gain adequate knowledge to conduct analysis of water samples in their locality to test the potability of water and thus serve the community in the larger interests.

References: ---

1)--Handbook of Water and waste water analysis by Kanwaljit Kaur

2)-Physico-Chemical Examination of water, sewage and Industrial effluents byN.Manivasakam

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

ATTENDANCE SHEET (Lecture)

13/04/17. (1 hour) 12:30-1:30pm 9.30-10:30a.m 18/04/17. 12.00 to 1:30p 18/04/17.

Sr. No	Name of student			
1	Rukmini Chimoji			
2	Deva Kumari Devalota	A	A	
3	Soniya Salgaonkar			
4	Priya Suroji			
5	Akshada Khandeparkar			
6	Saishree Kotkar			
7	Shradha Walavalker			
8	Karishma Kalangutkar	A		
9	Amrita Naik	A		
10	Sybil Pereira			
11	Adisha Narvekar			
12	Sunidhi Kurtikar			
13	Gigi Fernandes		A	
14	Sherin Saji			
15	Prathmesh Fal Dessai			
16	Alisha A. Naik			
17	Mamidi Dayamani			
18	Arti M. Gaude	A	A	
19	Manjusha R. Madkaikar			
20	Rohini R. Bhikoji			
21	Gautami Khandeparkar		A	

13/04/17.

3/5/17 Course Coordinator

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

ATTENDANCE SHEET (Chemistry Practical) 2 hrs 12:30 — 2:30 pm

15/04

Sr. No	Name of student	
1	Rukmini Chimoji	
2	Deva Kumari Devalota	Absent
3	Soniya Salgaonkar	
4	Priya Suroji	
5	Akshada Khandeparkar	
6	Saishree Kotkar	
7	Shradha Walavalker	
8	Karishma Kalangutkar	
9	Amrita Naik	
10	Sybil Pereira	
11	Adisha Narvekar	
12	Sunidhi Kurtikar	Absent
13	Gigi Fernandes	
14	Sherin Saji	
15	Prathmesh Fal Dessai	
16	Alisha A. Naik	
17	Mamidi Dayamani	
18	Arti M. Gaude	
19	Manjusha R. Madkaikar	
20	Rohini R. Bhikoji	
21	Gautami Khandeparkar	Absent

TM Audi 15/04/17

Mrs Deepa M. Audi

course coordinator

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

ATTENDANCE SHEET (Chemistry Practical) 17/04. 2hrs Time 12.15 – 2.15 pm (2hrs)

Sr. No	Name of student	
1	Rukmini Chimoji	
2	Deva Kumari Devalota	Absent
3	Soniya Salgaonkar	
4	Priya Suroji	
5	Akshada Khandeparkar	
6	Saishree Kotkar	
7	Shradha Walavalker	
8	Karishma Kalangutkar	
9	Amrita Naik	
10	Sybil Pereira	
11	Adisha Narvekar	
12	Sunidhi Kurtikar	
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15	Prathmesh Fal Dessai	
16	Alisha A. Naik	
17	Mamidi Dayamani	
18	Arti M. Gaude	
19	Manjusha R. Madkaikar	
20	Rohini R. Bhikoji	
21	Gautami Khandeparkar	Absent.

17/04/17. Mrs Deepa M. Aiidi

Course Coordinator

NIL

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

18/04/17

ATTENDANCE SHEET (Chemistry Practical)

10.30 – 11.30 (1hr) 11.30 – 12.30 (1hr)

Sr. No	Name of student		
1	Rukmini Chimoji		
2	Deva Kumari Devalota		
3	Soniya Salgaonkar		
4	Priya Suroji		
5	Akshada Khandeparkar		
6	Saishree Kotkar		
7	Shradha Walavalker		
8	Karishma Kalangutkar		
9	Amrita Naik		
10	Sybil Pereira		
11	Adisha Narvekar		
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16	Alisha A. Naik		
17	Mamidi Dayamani		
18	Arti M. Gaude		
19	Manjusha R. Madkaikar		
20	Rohini R. Bhikoji		
21	Gautami Khandeparkar		

Mrs Deepa M. Aradi

Course Coordinator

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

9.30-11.30 a.m

ATTENDANCE SHEET (Chemistry Practical)

19/04/17 2hrs 20/04/17 2hrs 9.30-11.30 a.m

Sr. No	Name of student			
1	Rukmini Chimoji			
2	Deva Kumari Devalota	A	A	
3	Soniya Salgaonkar			
4	Priya Suroji			
5	Akshada Khandeparkar			
6	Saishree Kotkar			
7	Shradha Walavalker			
8	Karishma Kalangutkar			
9	Amrita Naik			
10	Sybil Pereira			
11	Adisha Narvekar			
12	Sunidhi Kurtikar	A	A	
13	Gigi Fernandes			
14	Sherin Saji			
15	Prathmesh Fal Dessai		A	
16	Alisha A. Naik			
17	Mamidi Dayamani			
18	Arti M. Gaude			
19	Manjusha R. Madkaikar			
20	Rohini R. Bhikoji		A	
21	Gautami Khandeparkar	A	A	

DA DA

Course Coordinator

NIL

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

ATTENDANCE SHEET (Microbiology Practical)

Sr. No	Name of student	10:30-12 15/4/17	9:30-12 17/4/17	3:00-5:30 17/4/17	1:00-2:00 18/4/17	2:30-5:30 18/4/17	12:30-5:30 19/4/17	12:30-5:30 20/4/17	1:30-2:00 21/4/17
1	Rukmini Chimoji								
2	Deva Kumari Devalota	A	A	A	A	A	A	A	A
3	Soniya Salgaonkar								
4	Priya Suroji								
5	Akshada Khandeparkar								
6	Saishree Kotkar								
7	Shradha Walavalker								
8	Karishma Kalangutkar								
9	Amrita Naik								
10	Sybil Pereira								
11	Adisha Narvekar								
12	Sunidhi Kurtikar	A	A	A	A	A	A	A	A
13	Gigi Fernandes								
14	Sherin Saji								
15	Prathmesh Fal Dessai								
16	Alisha A. Naik								
17	Mamidi Dayamani								
18	Arti M. Gaude								
19	Manjusha R. Madkaikar								
20	Rohini R. Bhikoji								
21	Gautami Khandeparkar	A	A	A	A	A	A	A	A

ALISHA FERNANDES
SUBJECT TEACHER

NON CONVENTIONAL COURSE

DETERMINATION OF PHYSICO- CHEMICAL AND MICROBIOLOGICAL PARAMETERS IN DRINKING WATER (CHEMISTRY & ZOOLOGY)

ATTENDANCE SHEET (Lecture)

Sr. No	Name of student	15/4/17 (09:30 - 10:30 a.m)	21/4/17 (12:30 - 1:30 p.m)
1	Rukmini Chimoji		
2	Deva Kumari Devalota	A	A
3	Soniya Salgaonkar		
4	Priya Suroji		
5	Akshada Khandeparkar		
6	Saishree Kotkar		
7	Shradha Walavalker		
8	Karishma Kalangutkar		
9	Amrita Naik		
10	Sybil Pereira		
11	Adisha Narvekar		
12	Sunidhi Kurtikar	A	A
13	Gigi Fernandes		
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17	Mamidi Dayamani		
18	Arti M. Gaude		
19	Manjusha R. Madkaikar		
20	Rohini R. Bhikoji		
21	Gautami Khandeparkar	A	A

ALISHA FERNANDES
SUBJECT TEACHER

Dempo Charities Trust's
Dhempe College of Arts and Science
Panaji, Goa

Department Of Chemistry

Report of the long term non-conventional course entitled "**Determination of physicochemical and microbiological parameters in drinking waters**" for the academic year 2016-17.

The department of chemistry conducted a long term integrated (faculty of Chemistry and Bio-technology) value added non-conventional course entitled "Determination of physicochemical and microbiological parameters in drinking waters" for SY BSC students.

Duration of the course is of 33 hours which comprises of 4 sessions of lectures of one hour each and 29 hours of practical sessions. The intake capacity for the course is 25 students with a fee of Rs 1000-/- per student. This year 21 students were enrolled for the course .

The course syllabus includes introduction to microbiological and chemical parameters of drinking water, in addition there are practical sessions of determination of microbiological as well as physical and chemical parameters of drinking watersCourse objective is to equip students with practical knowledge of determination of water quality so as to qualify whether water is hygienically safe and fit for consumption.

Mrs Varsha Virginkar
Course Coordinator