

Shikshan Prasarak Mandal's



Jawahar Arts Science and Commerce College

Anadur, Tq. Tuljapur Dist – Osmanabad 413603

Department of Chemistry

Date: 27/06/2018

Notice

All the faculty members of Chemistry Department are hereby informed that a meeting of our department will be held on day 27/06/2018 under the chairmanship of our head Dr. M. M. Langade to discuss the following agenda. So everyone should attend on time.

Agenda for meeting:

1. To read and confirm the Proceeding of last meeting.
2. To read and confirm the certificate course.
3. To discuss and design the structure of certificate course.
4. To prepare and frame the syllabus of certificate course.
5. To formulate the BOS.
6. To prepare the Time-Table of certificate course.
7. To conduct other activities regarding the course.
8. Timely topics with the permission of chairperson.


HOD



hikshan Prasarak Mandal's

Jawahar Arts Science and Commerce College

Anadur, Tq. Tuljapur Dist – Osmanabad 413603

Department of Chemistry


Date: 27/06/2018

Proceeding of Chemistry Departmental Meeting

Today 27/06/2018 a meeting was held in department of chemistry under the chairperson Dr. M. M. Langade (HOD). In this meeting discussion made on to conduct the certificate course in 'Soap and Detergents' as per last year. All faculties are unanimously agreed to run this certificate course for B.Sc. students. Discussion was successful regarding to continue the last year course structure, syllabus, timetable, the nature of Question paper and the admission form. All faculties assured each other to give healthy contribution for running this course and all other efforts needed. Finally all faculties are firmly decided to forward to Hon. Principal for further approval from College Development Committee.

- Dr. D. N. Gatilewar
- Dr. V. G. Mane
- Dr. A. M. Pachpinde


Dr. M. M. Langde
Head, Dept. of Chemistry


PRINCIPAL
Jawahar Arts, Science & Commerce
College, Anadur,
Tal. Tuljapur, Dist. Osmanabad.



Shikshan Prasarak Mandal's

Jawahar Arts Science and Commerce College

Anadur, Tq. Tuljapur Dist – Osmanabad 413603

Department of Chemistry

Date: 29/06/2018

To,
Principal,
JASC College, Anadur.
Tq. Tuljapur, Dist. Osmanabad.

Sub: Regarding Approval for Short Term Certificate Course in Soap and Detergent.

Respected Madam,

With reference to above cited subject I am kindly informing you that a departmental meeting of chemistry was held on date 27/06/2018. In this meeting all faculties are unanimously decided to conduct a certificate course in "Soap and Detergents" during this academic year 2018-19. In this meeting we all faculty also make an action plan to run this certificate course with all necessary formalities.

So I kindly request you to grant an approval to conduct said short term certificate course of 30 hours from 16/ 07/2018 to 11/08/2018.

Sincerely Yours,

Head,

Department of Chemistry

PRINCIPAL

Jawahar Arts, Science & Commerce
College, Anadur,
Tal. Tuljapur, Dist. Osmanabad.



दुरितांचे तिनिर जावो !

Shikshan Prasarak Mandal's Anadur

JAWAHAR ART'S, SCIENCE & COMMERCE COLLEGE, ANADUR

Tq. Tuljapur, Dist. Osmanabad-413 603

NAAC GRADE - B++(CUPA 2.81)

President :- Shri. B.F.Kasture

Secretary :- Shri. S.N. Alure Guruji

I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9960242667)

☎ :- (02471) 246037, 246737

Date: 05/07/2018

To,
The Head,
Department of Chemistry,
Jawahar ASC College, Anadur,
Tq. Tuljapur, Dist. Osmanabad.

Subject: Approval to conduct the certified course for students of science.

As per the decision taken in College Development Committee, you are directed to conduct the Certificate course in Soaps and Detergents in your department for the students of our college. The course should be of 30 hours and be conducted in the academic year 2018-2019.

Convey your timetable of the said course to the timetable committee so as to avoid any overlapping of lecturers.


Principal

Jawahar Arts, Science & Commerce College
Anadur, Tal. Tuljapur, Dist. Osmanabad.



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☎ :- (02471) 246037, 246737

Date 07/07/2018

Under the chairmanship of Principal, Jawahar Arts, Commerce and Science College, Anadur, the Department of Chemistry organized a meeting for drafting the syllabus for short term certificate course on **Soaps and Detergents**. After considering views of all BOS members it is decided to retain the last year syllabus for this course. Accordingly the syllabus attached herewith was finalized. For this purpose the undersigned Prof. Ramdas Dhokale, Dr. Shivaji Ghodke, Head - Department of chemistry and other faculty members of Department of chemistry were present and contributed to final the syllabus.

Name	Designation	Sign
Dr. Jadhav M. B.	Principal	
Dr.M.M.Langade	Head, Department of Chemistry	
Dr. Ramdas Dhokale	Asso.Professor, Department of Chemistry, ASC College, Naldurg	
Dr. Shivaji Ghodke	Assistant Professor, Department of Chemistry, ASC College, Naldurg	
Dr. A.M.Pachpinde	Assistant Professor, Department of Chemistry	
Dr. D.N.Gatlewar	Assistant Professor, Department of Chemistry	
Dr. V.G.Mane	Assistant Professor, Department of Chemistry	

Principal
Jawahar Arts, Science & Commerce College,
Anadur, Tal. Tuljapur, Dist. Osmanabad

SYLLABUS

Certificate Course in "Soap and Detergents"

Unit I

1. Introduction of oils and fats, their sources, structure and composition of oils and fats, glycerides and fatty acids, their nomenclature, classification.
2. Natural sources of oils and fats, Position in India in relation to the world production of oils and fats.

Unit II

3. Introduction of soaps, synthetic detergents, raw materials for soaps and their selection, selection of other auxiliary raw materials.
4. General principles of soap making, chemistry of soap boiling and saponification reaction, manufacture of soap (cold, hot and semi boiled process), bleaching of soap, and manufacture of toilet soap.

Unit III

5. Various types of detergents, classification of detergents (anionic, cationic, nonionic, amphoteric), biodegradability.
6. Inorganic compounds of detergents (builder & other additives, phosphates, silicates, zeolites, etc)

Unit IV

7. **Synthetic detergents (raw materials)**
 - i. Organic raw materials for manufacturing of fatty acids, olefins, alkylbenzene, methylesters, fatty amines, ethylene oxide, propylene oxide sources and manufacture.
 - ii. Inorganic raw material for sulphonation viz; sulphuric acid, sulphonic acid, oleum, sulphur trioxide, chlorosulphonic acid.
 - iii. Sulphonation of organic raw materials like fatty acids, fatty acids ethoxylates plants and processes.
 - iv. Sulphonation of alkylbenzene, olefins & vegetable oils, plants and processes.


LIST OF EXPERIMENTS

- 1) Determination of physico-chemical characteristics of oil and fats
 - a. Moisture content
 - b. Acid value
 - c. Iodine value
 - d. Saponification reaction and Saponification value
- 2) Manufacture of liquid soap (shampoo) and laundry soap.

LIST OF BOOKS

S.No.	Author	Title	Edition	Publisher
1.	K.S. Parasuram	Soaps & detergents		
2.	NIIR Board	Handbook on Soaps, Detergents & Acid Slurry		Asia Pacific Business Press
3.	J.G. Kane	Soaps: Their Chemistry & Technology	First	Dr. R. Sarkarar
4.	Anthony M. Schwartz, James W. Perry & Julian Berch	Surface Active Agents & Detergents	Vol. II	Interscience Publishers
5.	Benjamin Levitt	Oils, Detergents & Maintenance		Chemical Publishing Company
6.	NIIR Board	The Complete Technology Book on Soaps		Asia Pacific Business Press
7.	George T. Austin	Shreve's Chemical Process Industries	Fifth	McGraw-Hill


 Coordinator


 Head,
 Dept. of Chemistry


Principal
 Jawahar Arts, Science & Commerce College
 Andour, Tal. Turajpur, Dist. Osmanabad

Jawahar Arts, Science & Commerce College, Anadur

Department of Chemistry

Conducting Co-curricular course

“Soaps and Detergents”

- | | |
|--------------------------|-------------------------------------------------------------------------------------------------------------|
| 1. Name of Department: | Chemistry |
| 2. Type of Programme: | value added / skill based certificate course |
| 3. Title of Programme: | Certificate course in “Soaps and Detergents” |
| 4. Name of Co-ordinator: | Dr. Amol Murlidhar Pachpinde |
| 4. Faculty offered: | B.Sc |
| 5. Name of Teachers: | Dr. M. M Langde
Dr. D. N. Gatilewar
Dr. V. G. Mane
Dr. A. M. Pachpinde |
| 6. Duration: | 30 hours |
| 7. Theory: | 15 Hours |
| 8. Practical: | 15 Hours. |


Head


Principal
Jawahar Arts, Science & Commerce College
Anadur Tal. Talasur, Dist. Osmanabad



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I/C Principal :- Dr.Smt. M.B. Jadhav(Mob.9960242667)

☎ :- (02471) 246037, 246737

Date: 09/07/2018

Notice

All the students of science faculty are hereby informed that the Department of chemistry is going to conduct a value added / skill based certificate course on "Soaps and Detergents" during this academic year 2018-19 from 16/07/2018 to 11/08/2018 (30 hours).

The interested students may enroll their name with Mr. Dilip Chavan at department of chemistry before 14/07/2018.


Coordinator


Head


Principal
Principal
Jawahar Arts, Science & Commerce College
Anadur, Tal. Tuljapur, Dist. Osmanabad

Jawahar Arts, Science and Commerce College, Andur
Department of Chemistry
Certificate Course on Soaps and Detergents
Enrollment List of Students 2018-19

Sr. No	Roll No	Name of Student	Mobile No.	Class
1	AA-01	Mule Ramkrishana Rajendra	Male	9823419 597
2	AA-02	Nirmale Mahadev Revan	Male	8485806 384
3	AA-03	Panchal Balvir Krushanath	Male	7767922 218
4	AA-04	Panchal Dnyaneshawar Narsappa	Male	7038857 451
5	AA-05	Patil Bharat Kondiba	Male	7066577 233
6	AA-06	Pawar Prachita Vinayak	Female	9860512 138
7	AA-07	Pawar Sagar Shivaji	Male	8412877 803
8	AA-08	Pawar Sagar Shrirang	Male	9764440 146
9	AA-09	Pawar Saudagar Laxman	Male	9604299 297
10	AA-10	Pawar Shewanta Sitaram	Female	8605941 787
11	AA-11	Pawar Vaishnavi Dattatrya	Female	8805572 812
12	AA-12	Rathod Kalpana Shyam	Female	7887490 149
13	AA-13	Saikh Soyal Tyyab	Male	9860321 424
14	AA-14	Sakhare Ravindra Rajendra	Male	7720819 127
15	AA-15	Salunke Pradip Madhukar	Male	9175260 711
16	AA-16	Sarne Puja Sidram	Female	9552715 851
17	AA-17	Savant Dipali Vijaykumar	Female	9764223 720
18	AA-18	Savant Godavari Haridas	Female	9860124 897
19	AA-19	Savant Prashant Gurunath	Male	7775896 375
20	AA-20	Sayyad Isam Shafik	Male	7057874 762
21	AA-21	Shaikh Simran Nabilal	Female	9763039 455
22	AA-22	Shinde Ashiwini Ankush	Female	9552249 339
23	AA-23	Shinde Pooja Vyankat	Female	9850122 468
24	AA-24	Solapure Rekha Mahadev	Female	9922682 104
25	AA-25	Surwase Manoj Vitthal	Male	9561619 796
26	AA-26	Suryawanshi Swati Gangaram	Female	9970017 142
27	AA-27	Swami Vaibhav Chandrakant	Female	9767442 383
28	AA-28	Torkade Kishor Jagannath	Male	9420735 725
29	AA-29	Vharte Pankaj Bhimashankar	Male	7350790 323
30	AA-30	Yadav Ganesh Ankush	Male	9075847566

Sr. No.	Male/Female	Total No. of Students
1	Male	17
2	Female	13
Total		30


Co-ordinator
(Dr. A. M. Pachpinde)


Head


Principal
Jawahar Arts, Science & Commerce College
Andur, Tal. Turana, Dist. Osmanabad.

Department of Chemistry

Jawahar Arts, Science and Commerce College, Anadur

Add on Course on Food Chemistry

Theory Time Table – 2018-19

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
03.00 pm to 04.00pm	PAM	DNG	VGM	LMM	---	---

Practical Time Table – 2018-19

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
03.00 to 05.30	--	--	--	---	PAM	DNG

List of Faculty Contributing for this Course

- Dr. M. M Langde
- Dr. D. N. Gatilewar
- Dr. V. G. Mane
- Dr. A. M. Pachpinde



Principal
Principal
Jawahar Arts, Science & Commerce College
Anadur, Tal. Tuljapur, Dist. Osmanabad

Jawahar Arts, Science and Commerce College, Anadur
Department of Chemistry
Certificate Course on "Soaps and Detergents"

Date: 11/08/2018

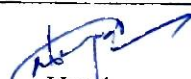
Notice

All the students enrolled in certificate course in food chemistry run by department of chemistry are hereby informed that the Department of chemistry is going to conduct a final test on "Soaps and Detergents" during this month on

Time-Table for Exam 2018-19

Sr. No	Roll. Number	Name of Student	Hall Number
1	AA-01	Mule Ramkrishana Rajendra	05
2	AA-02	Nirmale Mahadev Revan	
3	AA-03	Panchal Balvir Krushanath	
4	AA-04	Panchal Dnyaneshawar Narsappa	
5	AA-05	Patil Bharat Kondiba	
6	AA-06	Pawar Prachita Vinayak	
7	AA-07	Pawar Sagar Shivaji	
8	AA-08	Pawar Sagar Shrirang	
9	AA-09	Pawar Saudagar Laxman	
10	AA-10	Pawar Shewanta Sitaram	
11	AA-11	Pawar Vaishnavi Dattatrya	
12	AA-12	Rathod Kalpana Shyam	
13	AA-13	Saikh Soyal Tyab	
14	AA-14	Sakhare Ravindra Rajendra	
15	AA-15	Salunke Pradip Madhukar	
16	AA-16	Sarne Puja Sidram	06
17	AA-17	Savant Dipali Vijaykumar	
18	AA-18	Savant Godavari Haridas	
19	AA-19	Savant Prashant Gurunath	
20	AA-20	Sayyad Isam Shafik	
21	AA-21	Shaikh Simran Nabilal	
22	AA-22	Shinde Ashiwini Ankush	
23	AA-23	Shinde Pooja Vyankat	
24	AA-24	Solapure Rekha Mahadev	
25	AA-25	Surwase Manoj Vitthal	
26	AA-26	Suryawanshi Swati Gangaram	
27	AA-27	Swami Vaibhav Chandrakant	
28	AA-28	Torkade Kishor Jagannath	
29	AA-29	Vharte Pankaj Bhimashankar	
30	AA-30	Yadav Ganesh Ankush	


Co-coordinator


Head


Principal
Jawahar Arts, Science & Commerce College
Anadur Tal. Jalgaon Dist. Osmanabad.

Department of Chemistry
Jawahar Arts, Science and Commerce College, Anadur

Add on Course on "Soaps and Detergents"

Question Paper – 2018-19

Date: 13/08/2018

All questions are necessary

Each Ques. Carry 2 marks.

Total Marks: 50

1. Stearic acid is present in
 1. Cotton-seed oil
 2. Soya-been
 3. Butter
 4. Linseed

2. Oleic acid is present in
 1. Cottonseed oil
 2. Butter
 3. Animal fat
 4. All the above

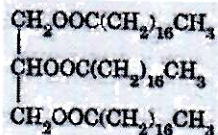
3. Linoleinic acid is present in
 1. Coconut-oil
 2. Cottonseed oil
 3. Butter and animal fat
 4. Linseed

4. Which of the following is a saturated fatty acid?
 1. Myristoleic acid
 2. Lauric acid
 3. Palmitoleic acid
 4. Linoleic acid

5. Unsaturated oils contain
 1. One or more C=C double bonds
 2. One or more C≡C triple bonds
 3. Both (1) and (2)
 4. None of these

6. Select the incorrect statement from the following option.
 1. Oils are saturated triglyceride
 2. Oils have lower melting points
 3. Oils are liquid at room temperature
 4. Examples of oils are glyceryl trioleate, coconut oil, olive oil, etc.


7. View answer the scientific term for "water-hating" is:
1. Hydroxide
 2. Hydrophilic
 3. Hydrophobic
 4. None of these
8. Synthetic detergents are better than soaps because:
1. Synthetic detergents works in both soft water and hard water.
 2. Soaps works in both soft water and hard water.
 3. Synthetic detergents work in only in hard water.
 4. Soaps work only in hard water.
9. If the carbon chain is highly branched, the corresponding detergent is -----
1. Soft and biodegradable.
 2. Soft and non-biodegradable.
 3. Hard and biodegradable.
 3. Hard and non-biodegradable.
10. The % weight of detergent in washing powder is
1. 5-10
 2. 50-70
 3. 13-30
 4. 30-45
11. Which of the following chemical is added to in washing powder for keeping it dry?
1. Sodium silicate.
 2. Inorganic phosphate.
 3. Carboxyl methyl cellulose.
 4. Sodium perborate.
12. Soap removes grease by _____.
1. Osmosis
 2. Emulsification
 3. Adsorption
 4. Coagulation
13. What is the name of the soap produced through the saponification of this triglyceride?



1. Sodium dececanoate
2. Sodium oleate
3. Sodium stearate
4. Sodium acetate

14. Lye is used in soap-making. Lye is a concentrated solution of which ionic compound?
1. K_2CO_3
 2. $CuSO_4$
 3. $NaOH$
 4. $NaCl$
15. Which of the following term describe saponification?
1. Cleaving of ester molecules into carboxylic acid and alcohol
 2. Dehydration synthesis by removing water
 3. Hydrolysis of a salt by adding a weak acid
 4. Synthesis of two alkyl groups to make ether
16. Which of the following is considered a useful alkali in saponification reactions?
1. CCl_4
 2. Cl^-
 3. $NaOH$
 4. Pb^+
17. Which of the following statement is true about saponification value of oil?
1. The shorter the chain of fatty acid, the higher is the saponification value
 2. The shorter the chain of fatty acid, the higher is the saponification value
 3. The higher the saturation in chain of fatty acid, the lower is the saponification value
 4. The lower the saturation in chain of fatty acid, the higher is the saponification value
18. Saponification value is the number of milligrams of KOH required to saponify what present in the 1g of oil or fat?
1. Salts
 2. Hydrocarbon
 3. Fatty acids
 4. Unsaturation
19. Soft soaps are the limitation of hot process because of their _____
1. High alkalinity
 2. Low alkalinity
 3. Low solubility in water
 4. High solubility in water
20. Which of the following is the residual product in the formation of soap?
1. Glyceraldehyde
 2. Glycerol
 3. Glycerine
 4. Acrylonitrile
21. Which of the following is a typical soap molecule?
1. Calcium stearate
 2. Potassium permanganate
 3. Sodium bicarbonate
 4. Sodium stearate

22. Select the correct statement from the following options.
1. The soap micelle is unstable due to positive charge on its head
 2. The soap micelle is stable due to positive charge on its head
 3. The soap micelle is unstable due to negative charge on its head
 4. The soap micelle is stable due to negative charge on its head
23. When a soap is dissolved in ethanol followed by evaporation of excess of solvent, what type of soap is formed?
1. Transparent soap
 2. Floating soap
 3. Shaving soap
 4. Laundry soap
24. What is the use of trisodium phosphate in soap powder?
1. To make the soap act rapidly
 2. To make it lather
 3. To prevent rapid drying
 4. for good odour.
25. Dishwashing liquids are examples of
1. Soaps
 2. Anionic detergents
 3. Cationic detergents
 4. Non-ionic


PRINCIPAL
Bewahar Arts, Science & Commerce
College, Anandpur
Tal. Jalandhar Dist. Gurdaspur.

Department of Chemistry

Jawahar Arts, Science and Commerce College, Anadur

Add on Course on "Soaps and Detergents"

Practical Question Paper – 2018-19

Date: 13/08/2018

All questions are necessary

Each Ques. Carry 20 marks.

Total Marks: 40

Q.1. Determine the iodine value of given vegetable oil. 20 M

Q.2. Prepare laundry soap from given coconut oil using KOH alkali. 20 M

-----*****-----


PRINCIPAL
Jawahar Arts, Science & Commerce
College, Anadur
Tal. Tuljapur, Dist. Osmanabad.

Department of Chemistry
Jawahar Arts, Science and Commerce College, Anadur

Add on Course on Soaps and Detergents

Mark List – 2018-19

Sr. No	Roll. No.	Name of Student	Theory	Practical	Viva	Total
			50	40	10	100
1	AA-01	Mule Ramkrishana Rajendra	36	30	5	71
2	AA-02	Nirmale Mahadev Revan	40	37	6	83
3	AA-03	Panchal Balvir Krushanath	40	39	7	86
4	AA-04	Panchal Dnyaneshawar Narsappa	38	28	8	74
5	AA-05	Patil Bharat Kondiba	45	33	5	83
6	AA-06	Pawar Prachita Vinayak	42	36	4	82
7	AA-07	Pawar Sagar Shivaji	39	38	7	84
8	AA-08	Pawar Sagar Shrirang	41	39	7	87
9	AA-09	Pawar Saudagar Laxman	36	30	7	73
10	AA-10	Pawar Shewanta Sitaram	41	29	5	75
11	AA-11	Pawar Vaishnavi Dattatrya	38	37	7	82
12	AA-12	Rathod Kalpana Shyam	35	36	5	76
13	AA-13	Saikh Soyal Tyyab	46	34	7	87
14	AA-14	Sakhare Ravindra Rajendra	33	28	8	69
15	AA-15	Salunke Pradip Madhukar	37	26	6	69
16	AA-16	Sarne Puja Sidram	36	25	6	67
17	AA-17	Savant Dipali Vijaykumar	42	38	7	87
18	AA-18	Savant Godavari Haridas	39	38	8	85
19	AA-19	Savant Prashant Gurunath	41	39	8	88
20	AA-20	Sayyad Isam Shafik	36	35	6	77
21	AA-21	Shaikh Simran Nabilal	43	35	6	84
22	AA-22	Shinde Ashiwini Ankush	35	24	9	68
23	AA-23	Shinde Pooja Vyankat	45	27	6	78
24	AA-24	Solapure Rekha Mahadev	39	28	7	74
25	AA-25	Surwase Manoj Vitthal	38	26	5	69
26	AA-26	Suryawanshi Swati Gangaram	45	36	5	86
27	AA-27	Swami Vaibhav Chandrakant	43	38	8	89
28	AA-28	Torkade Kishor Jagannath	42	36	6	84
29	AA-29	Vharte Pankaj Bhimashankar	38	36	7	81
30	AA-30	Yadav Ganesh Ankush	46	38	8	92

Co-ordinator

(Dr. A. M. Pachpinde)

Head of Department

Principal
 Jawahar Arts, Science & Commerce College
 Anadur, Tal. Fuljapur, Dist. Osmanabad.

Shikshan Prasarak Mandal's
Jawahar Arts, Science and Commerce College, Anadur.
Dist. Osmanabad.

Short Term Certificate Course in Soaps and Detergents

Conducted by

Department of Chemistry

Student Feed Back Form- Year 2018-19

1) Was the overall course satisfactory to meet your learning needs?

.....

2) What innovative concepts did you learnt from this course?

.....

3) What improvements did you expect in this course?

.....

4) After this course are you interested to take sericulture as an income source and work in Apiculture sector?

.....

5) How will this course help you with respect to your all-round development?

.....

Signature of Student


Coordinator


Principal
Jawahar Arts, Science & Commerce College
Anadur, Tal. Osmanabad, Dist. Osmanabad.

Shikshan Prasarak Mandal's

**JAWAHAR ARTS, SCIENCE AND COMMERCE COLLEGE, ANADUR
DIST. OSMANABAD.**

(Department of Chemistry)

Report

of

Short Term Certificate Course

SOAPS AND DETERGENTS

Submitted

To

***The Principal
Jawahar Arts, Science and Commerce College,
Anadur.***

By

***Department of Chemistry
Jawahar Arts, Science and Commerce College, Anadur
Academic Year-2017-18***

REPORT OF
SHORT TERM CERTIFICATE COURSE

Soaps and Detergents

Academic Year-2018-19

The Principal,
Jawahar Arts, Science and Commerce College,
Anadur. Dist. Osmanabad.

Respected Madam,

As per the directions of the Principal, Jawahar Arts, Science and Commerce College Anadur and resolution in the Departmental meeting held on 27/06/2018. The Department of Chemistry conducted a 30 hours short term certificate course for the under graduate students of Jawahar Arts, Science and Commerce College, Anadur. The course was entitled as "**Soaps and Detergents**".

The Principal objectives of the courses were as follows

- To introduce students about oils and fats, their sources, structure and composition of oils and fats, glycerides and fatty acids, their nomenclature, classification
- To learn theoretical and practical knowledge behind cleaning action of soaps and detergents.
- To empower the students with knowledge of soap and detergent making

The course was held from 16/07/2018 to 11/08/2018. Total 30 Students were enrolled and attended the course. The participants were they enjoyed every new thing in learning. The participants expressed their desire to share the knowledge gained with other students in their class. Overall the short term certificate course is completed successfully.


Coordinator
Department of Chemistry