Dr. Ch. V. V. Srinivas,
2022-23

Government of Andhra Pradesh Commissionerate of Collegiate Education

Academic & Administrative Audit of Degree Colleges (2021-22): 2022-23

Format - III A (To be Filled by Faculty and handed over to Academic Advisor)

Zone: II District: East Godavari District

Name of the College and Address: S.K.R. Government Degree college (Women) Rajamahendravaram

Name of the Lecturer: Dr. Ch. V. V. Srinivas

Name of the Subject: Chemistry

Date of Joining in Degree College/Date: 05/12/2007 Date of Retirement:

S.No	Key Indicator	List of files/ documents to be kept ready as a proof of Key Indicator	Information in support of the key indicator	Key Aspect Scores	Predetermined Weightage (Wi) for Key Indicator	Key Indicator Grade Points (KIGP) (A =3; B=2; C=1; D=0)	Key Indicator Wise Weighted Grade Points (KIWWGP) = KIGP X Wi	KIWWGP as per Academic Advisor's grading	Guidelines
I-CURRICULAR ASPECTS									
1	Curricular Planing and Implementation (for Autonomous Colleges - Efforts for Curriculum Design and Development to be considered)	Preparation and Implementation of 1. Annual Academic Curriculum Plan 2.Course Objectives & Outcomes	Course wise/Sem wise Records for the Academic Year	2x5= 10	30	B	60		1)All five key indicators =3 Grade points/A 2)Any four key indicators =2 Grade points/B 3)Any two key indicators =1 Grade points/C 4)No Indicator=0/D
		3. Teaching Diary 4. Lesson Plans	Course wise/Sem wise Records for the Academic Year	2x5= 10					
		5. Active Participation in BOS	Invitation Letter & Attendance	10					
2	Curriculum Flexibility/Enrichment	1. Additional inputs related to Curriculum of the courses taught	a)Course wise/Sem wise additional inputs Reports	10	20	B	40		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key indicator =1 Grade point/C 4)No Indicator=0/D
		2 Value added courses offered & completed a)Certificate b)Diploma c)Any Online courses like MOOCs	b)Report on Certificate/ Diploma c)Any Online courses like MOOCs	2x5=10					
3	Feedback system	Feedback on Curriculum by Students a) Collected b) Analysed c) Action taken	Course wise/Sem wise a)Reports of Feedback b)Analysis Reports c)Action taken Report	10	10	A	30		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key indicator =1 Grade point/C 4)No Indicator=0/D
II-TEACHING, LEARNING & EVALUATION									
4	Catering to Student Diversity	1. Report on grouping of students into Slow, Moderate and Advanced learners 2. Course wise activities designed for Slow, Moderate and Advanced learners	1.Course wise/Sem wise Reports with lists of students (Slow, Moderate and Advanced learners) 2.Course wise/Sem wise Activities designed for Slow, Moderate and Advanced learners	10	20	A	20		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key indicator =1 Grade point/C 4)No Indicator=0/D
		1. Report on Course wise Bridge Courses conducted 2. Report on Course wise Remedial coaching conducted	1.Course wise/Sem wise Reports on Bridge Course conducted 2.Course wise/Sem wise Report on Remedial coaching conducted	2x5= 10		A	20		

S.No	Key Indicator	List of files/ documents to be kept ready as a proof of Key Indicator	Information in support of the key Indicator	Key Aspect Scores	Predetermined Weightage (Wi) for Key Indicator	Key Indicator Grade Points (KIGP) (A =3; B=2; C=1; D=0)	Key Indicator Wise Weighted Grade Points (KIWWGP) = KIGP X Wi	KIWWGP as per Academic Adviser's grading	Guidelines
5	Teaching-Learning Process	1. Report on student centered methods implemented (Course wise) 2.Report on implementation of ICT in teaching and learning (Course wise) or Report on implementation of Computer/Internet assisted learning (Course wise) 3. Report on the Use of LMS tools (Course wise) 4. Contribution for the development of LMS in the concerned subject 5. Report on innovative pedagogical Tools used	Course wise/ Sem wise Reports	50	50	B	100		1)All five key indicators =3 Grade points/A 2)Any three key indicators =2 Grade points/B 3)Any two key indicator =1 Grade point/C 4) Below two=0/D
6	Teacher Profile and Quality	1. Report on Seminars/Conferences/ Workshops/ Guest Lectures organized 2. Report on Participation in Seminars/Conferences/Workshops/ Guest Lectures/ Invited talks 3. Awards and recognition 4. Participation in Short term/ Orientation /Refresher courses/FDPs 5. E- Content Development /MOOCs (Massive Open Online Courses) 6. Additional Qualifications acquired during the last two years	Reports and Certificates	30	30	A	90		1)Any five key indicators =3 Grade points/A 2)Any three key indicators =2 Grade points/B 3)Any two key indicator =1 Grade point/C 4) Below two=0/D
7	Evaluation Process and Reforms	1. Report on Formative Evaluation (CIE)	Department wise reports regarding 1. Mid exams, Seminar Reports, Assignment books, Projects and any other tools of Internal Assessment 2. Departmental Internal Marks Register for CIA verified by the Principal	10	90	A	90		1)All four key indicator Metrics =3 Grade points/A 2) Metrics 1, 2, 4 =1 Grade points/B 3)Metrics 1, 2,3 =1 Grade point/C 4) Below two=0/D
		2. Assignments-Critical, Innovative, text book and Internet based		10					
		3. Involvement in Summative evaluation		5					
		4. Maintaining Marks Register & Result Analysis register.		5					
8	Student Performance and Learning Outcomes	1. Assessment and Attainment of Course Outcomes 2. Report on Student seminars/ Student demonstrations (Course wise) 3. Report on activities like Quiz/ Group discussion/ Poster presentation (Course wise) 4. Report on Field trips (Course wise) 5. Report on Student Study projects (Course wise)	Course wise Reports	5x6=30	10	A	90		1)All five key indicators =3 Grade points/A 2)First KI Metric and any three other =2 Grade points/B 3)First KI Metric and any two other =1 Grade point/C 4) Below two=0/D

S.No	Key Indicator	List of files/ documents to be kept ready as a proof of Key Indicator	Information in support of the key indicator	Key Aspect Scores	Predetermined Weightage (Wi) for Key Indicator	Key Indicator Grade Points (KIGP) (A =3; B=2; C=1; D=0)	Key Indicator Wise Weighted Grade Points (KIWWGP) = KIGP X Wi	KIWWGP as per Academic Advisor's grading	Guidelines
III-RESEARCH, INNOVATIONS AND EXTENSION									
9	Funding obtained for Research (Govt./Non-Governmental Bodies)	1. Minor Research Projects 2.Major Research Projects 3.Consultancy Projects	Letter of intimation and award letters (For Current Year only Either Ongoing OR Completed)	5 10 5	20	D	0		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key indicator =1 Grade point/C
10	Research Publications and Awards	1. Papers Published in Journals / Chapters published in edited volumes 2. Books published as single author 3. Books published as Co-Author 4. Papers/Chapters published as Co-Author (Note: A maximum of 3 publications in Scopus/Web of Science/ICI or UGC -CARE Listed journals Any book with ISBN shall be considered) 5.Research Guideship 6.Awards in recognition of research work		10 15 10 5 10 10	50	C	10		1)Any three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key indicator =1 Grade point/C 4) No Indicator=0/D
11	**Extension Activities**	Academic Extension activities through DRC/ Faculty Outreach (Curriculum/ Skill/Domain related)	Reports in the NAAC format	10	20	C	10		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key Indicator =1 Grade point/C 4)No Indicator=0/D
		Involvement in activities related to community service a. Sensitising the students about the value of Community Service 5 Organising the activity (A maximum of 5 Programmes resulting in Community Service like ODF/Swachh Bharat/UBA etc)	Reports in the NAAC format	5+5		B	20		
12	**Functional MoUs /Collaborations with Govt and Non Governmental Organisations**	1.Collaboration with University/ Industry/NGO/ Any other Agency 2. Consultancy offered 3. Amount generated through Consultancy	MoUs - 5 points Consultancy offered -10 Amount generated through Consultancy - 5 points	20	20	C	20		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key Indicator =1 Grade point/C 4)No Indicator=0/D
IV - USE OF INFRASTRUCTURE & LEARNING RESOURCES									
13	Physical facilities	Infrastructural facilities in the Department/Colleges a. Use of Digital Classrooms b. Use of Virtual Classroom c. Use of Lab and Use of Library e. Nlist usage f. Maintenance of Departmental Library	Log books related to usage	20	20	A	60		1)Any four key indicators =3 Grade points/A 2)Any three key indicators =2 Grade points/B 3)Any two key indicators =1 Grade point/C 4) Below two Indicators=0/D

S.No	Key Indicator	List of like/ documents to be kept ready as a proof of Key Indicator	Information in support of the key indicator	Key Aspect Scores	Predetermine d Weightage (Wi) for Key Indicator	Key Indicator Grade Points (KIGP) (A =3; B=2; C=1; D=0)	Key Indicator Wise Weighted Grade Points (KIWWGP) = KIGP X Wi	KIWWGP as per Academic Adviser's grading	Guidelines
V- ROLE IN STUDENT SUPPORT AND PROGRESSION									
14	Student Support	1. Counseling of students as Mentor/ Class teacher. a. Student Profile Collection b. Semester wise updation and maintenance. 2. Any other Study Material /Guidance. a)Academic guidance for the advanced learner (offering suggestions/reference books) b)Handholding the slow learners (offering study material-question banks) 3. Guiding/Monitoring Students for CSP/Internship 4. Organizing/Participation in Parent Teacher Meetings	Reports in the NAAC format	20 10 10 10	50	A	150		1)All Four key indicators =3 Grade points/A 2)Any Three key indicators =2 Grade points/B 3)Any Two key indicator =1 Grade point/C 4)Below two -0/D
15	Student Progression	Report on Programme/Course wise students progression to a)Higher Education b)Employment c)Entrepreneurship	Reports in the NAAC format	10 10 10	30	B	60		1)All three key indicators =3 Grade points/A 2)Any two key indicators =2 Grade points/B 3)Any one key indicator =1 Grade point/C 4)No Indicator=0/D
VI- ROLE IN INSTITUTIONAL GOVERNANCE									
16	Participation in Institutional Governance and Leadership	a)Contribution to Departmental Vision & Mission and Departmental Action Plan b)Participation in different institutional committees and preparation of committee reports c)Participation in different institutional activities that focus on value based education d)Contribution to IQAC/quality initiatives	Reports in the NAAC format	4x10	40	A	120		1)All Four key indicators =3 Grade points/A 2)Any Three key indicators =2 Grade points/B 3)Any Two key indicator =1 Grade point/C 4)Below two -0/D
VII - BEST PRACTICES									
17	Best Practices	Identification and Contribution to a)The Departmental Best practices b)Institutional Best practices	Reports in the NAAC format	20	20	A	60		1)All Two key indicators =3 Grade points/A 2)Any one key indicator =2 Grade points/B 3)No Indicator=0/D
Total Grade points					500		1050		

Name & Signature of the Principal

PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM.
East Godavari Dist., Andhra Pradesh

Name & Signatures of the Academic advisors

1)

2)

3)

S.K.R.COLLEGE FOR WOMEN

Accredited at B+ Level by NAAC
RAJAHMUNDRY- East Godavari Dist. (A.P.)

PERFORMANCE APPRAISAL REPORT FOR SELF APPRAISAL OF TEACHERS UPTO 2015

A .General Information:

a) Name : CH.V.V.SRINIVAS

b) Date of Birth :.15-04-1962

c) Residential Address : 29-27-20, LAKSHMI VARAPU PETA,
RAJAHMUNDRY- 533 104.
Mobile: 9441073416
Email: chvvsrinivas@gmail.com

d) Designation : LECTURER

e) Department : CHEMISTRY

f) Area of Specialization : ORGANIC CHEMISTRY

g) Date of Appointment : 01-08-1985

i) In the Institution : 05-12-2007

ii) In the Present post : 05-12-2007

h). Employee I.D. : 0380076

i) Honors Conferred

B. Academic Qualification

Exam. Passed	Board / University	Subject	Year	Division /Grade Merit etc.,
High School	BOARD OF SECONDARY EDUCATION		1977	II
Higher Secondary or Pre-Degree	BOARD OF INTERMEDIATE EDUCATION	M.P.C	1979	III
Bachelor's Degree	ANDHRA UNIVERSITY. VISAKHAPATNAM	C.M.P.	1983	II
Master's Degree	ANDHRA UNIVERSITY. VISAKHAPATNAM	ORGANIC CHEMISTRY	1985	I
Research Degree(s)	ANDHRA UNIVERSITY. VISAKHAPATNAM	ENGINEERING CHEMISTRY	2020	

Other Diploma/ Certificates etc.,				

C) Research Experience & Training :

Research Stage	Title of Work / Theses	University where the work was carried out
M.Phil or equivalent		
Ph.D.	SYNTHESIS, CHARACTERISATION AND CATALYTIC STUDIES OF GRAPHENE OXIDE COPPER FERRITE NANO COMPOSITES	ANDHRA UNIVERSITY COLLEGE OF ENGINEERING, VISAKHAPATNAM
Post-Doctoral		
Publications		
Research Guidance (give name of students guided successfully)		
Training (Please Specify)		

D) Research Projects carried out.

Title of the Project	Name of the funding Agency	Duration	Remarks

E) Details regarding refresher courses/ orientation courses, Seminars, Conferences, Symposia, Workshops etc., attended

S.No	Name of the Seminar / Conference / Symposia / Workshop etc.,	Name of the Sponsoring Agency	Place and Date
1	National work shop on Applicaations of Radio Isotopes	Department of Chemistry,	S.K.R.College(W), Rajahmundry 6th Dec. 2008
2	National level seminar on Medicinal and aromatic plants and value added products	U.G.C.	S.K.R.College(W), Rajahmundry 9th&10th Jan. 2009

3	National seminar on alternate energy sources (Traditional/Local/Modern initiatives)	U.G.C.	S.K.B.R.College, Amalapuram 4th & 5th Feb. 2009
4	Work shop on Chromatography and Instrumental Techniques	Department of Chemistry	S.K.R.College(W), Rajahmundry 29th Nov. 2009
5	Internship Science Camp – Inspire	DST	S.K.R.College(W), Rajahmundry 7th – 11th June 2011
6	State level Work shop on Applicaations of Radio Isotopes	U.G.C.	S.K.R.College(W), Rajahmundry 10th Nov. 2011
7	International Conference on Effect of Effluents on Environment (EEEE-2014)	U.G.C.	Andhra University, Waltair 30th June&1st July 2014
8	National Work shop on Radio Chemistry and Applications of Radio Isotopes	BRNS – DAE	Govt. College (A), Rajahmundry 24th – 29th Nov. 2014
9	Inter Disciplinary Refresher Course in Environmental Sciences	U.G.C.-H.R.D.C.	Andhra University, Waltair 1st – 21st June 2015
10.	National Conference on Advanced Molecular Spectroscopic Techniques (AMST-2015)	U.G.C.	Govt. College (A), Rajahmundry 21st – 22nd Aug.. 2015
11	National Seminar on Current Research Trends and Development in Organic Chemistry (CRTADIOS-2015)	APSCHE	Adikavi Nannayya University Campus, Velugubonda 5th – 6th Oct. 2015

F) Teaching Experience:

Courses Taught	Name of the University/ College/ Institution	Duration
U.G	S.K.R.College for Women, Rajahmundry	Dec. 2007 to till date
P. G.	---	---
M.Phil	---	---
Any Other	---	---

Total Teaching Experience : 30 Years

a) Under Graduate : 08 Years

b) Post Graduate :

G) Innovations/ Contributions in Teaching:

a) Designer Curriculum :

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b) Teaching Methods : Power Point Presentations – Internet based Teachings- Crystal Models

c) Laboratory Experiments :

d) Evaluations Methods : Assaignments – Unit Tests

.

e) Preparation of Resource Material Including Books, Reading Materials. Laboratory manuals : Chapter wise Reading materials, Lab Manuals for : I^{st,} IInd& IIIrd B.Sc.

f) Remedial Teaching/ Student Counseling (Academic) : Remedial Teaching for academically slow learners : and Counseling for the Incharge Class Pupil

g) Any Other :

H) Extension work/ Community

a) Please give a short account of Your contribution to

i) Community Work such as values of National Integration secularism, democracy, socialism, humanism, peace, scientific temper, flood or drought relief, small family norms :

ii) National Literacy Mission

b) Positions held / Leadership role played in organizations linked with extension work and National : Convener Social Service League

service scheme (NSS) or NCC or .

any other activity.

I. Participation in Corporate Life :

Please give a short account of your Contribution to

a) College / University / Institution **:**,Member Students Union, Science Association and College Admission committee

b) Co- curricular Activities **:**

c) Enrichment of Campus life **:**

d) Students welfare and Discipline **:**

e) Membership / Participation in Bodies / Committees on Education and National Development **:**

f) Professional organization of Teachers **:**

J) a) Membership of Professional bodies/ Societies

b) Editorship of Journals

K) Assessment

a) Steps taken by you for the evaluation of the course programme taught:

L) General Data

State brief assessment of your performance indicating

(a) Achievements, Paper Revaluation & Evaluation

(b) Difficulties faced and

(c) Suggestions for improvement

(Signature of the Teacher)

Commissionerate of Collegiate Education, Andhra Pradesh.
PROFORMA FOR TEACHING PLAN

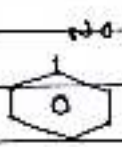
Name of the Department	Chemistry
Name of the Lecturer	Dr. Ch. V.V. Srinivas
Course / Group	B.Sc., CBZ(T)
Paper	V A
Name of the Topic	Nitrohydrocarbons
Hours required	
Learning Objectives	
Previous Knowledge to be reminded	

Topic Synopsis: Nomenclature and classification of nitro hydrocarbons.

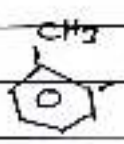
CH_3-NO_2 — nitro methane

$CH_3-CH_2-NO_2$ — Nitro-ethane

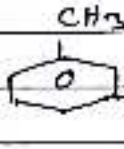
$CH_3-CH_2-CH_2-NO_2$ — 1-nitro propane



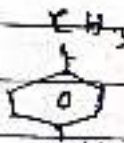
nitro Benzene



o-Nitro toluene



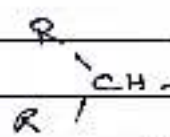
m-Nitro Toluene



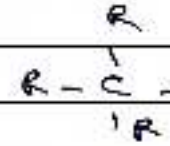
p-nitro Benzene

classification:

$R-CH_2-NO_2$ — 1° nitro alkane

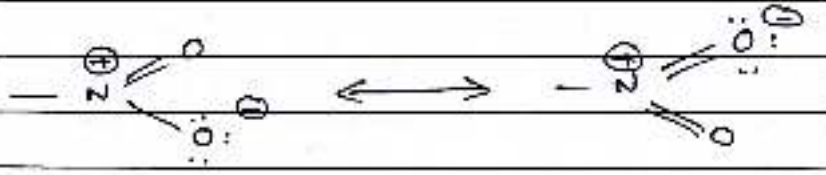


2° —

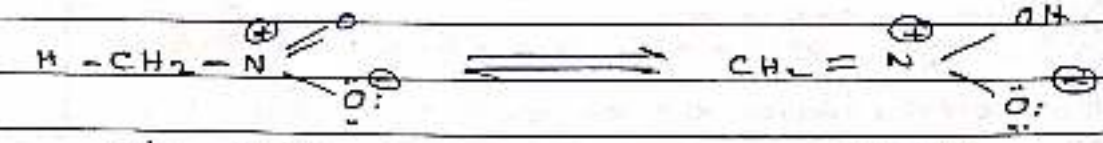


3° —

Structure:



Tautomerism of nitroalkanes - aci and nitro forms



nitro form

Aci form

Nef reaction: Sodium salts of 1°- and 2°- nitro alkanes give aldehydes and ketones respectively on reaction with H_2SO_4.

$$2\ R-\overset{H}{\overset{|}{C}}=N\begin{smallmatrix}\nearrow ONa\\ \searrow O\end{smallmatrix} + H_2SO_4 \longrightarrow R-CHO + 2\ NaHSO_4 + H_2O + N_2O$$

$$2\ R_2C=N\begin{smallmatrix}\nearrow ONa\\ \searrow O\end{smallmatrix} + H_2SO_4 \longrightarrow 2\ \begin{smallmatrix}R\\ R\end{smallmatrix}\!\!>C=O + 2\ NaHSO_4 + H_2O + N_2O$$

Mannich Reaction: 1°- and 2°- nitro alkanes show condensation with formaldehyde, ammonia or a 1°- or 2°-amines

$$R_2CH-NO_2 + HCHO + R-NH_2.HCl \longrightarrow R_2-\overset{NO_2}{\overset{|}{C}}-CH_2-\overset{R}{\overset{|}{N}}H.HCl + H_2O$$

Michael addition. Addition of nitromethane to ethyl cinnamate

$$CH_3-NO_2 + C_6H_5-CH=CH-COOC_2H_5 \xrightarrow{C_2H_5ONa} O_2N-CH_2-\overset{C_6H_5}{\overset{|}{CH}}-CH_2-COOC_2H_5$$

Examples / Illustrations	
Additional Inputs	
Teaching Aids used	
Reference cited	A.T.B. of S. Chem – Bahl and Bahl
Student Activity planned after the teaching	
Activity planned outside the class room if any	
Any other activity	

Signature of the Lecturer

Signature of the Department I/C

Commissionerate of Collegiate Education, Andhra Pradesh.
PROFORMA FOR TEACHING PLAN

Name of the Department	Chemistry
Name of the Lecturer	Dr. Ch. V. V. Srinivas
Course / Group	B. Sc. – CBZ(E), MPC(E)
Paper	III – Sem. – III
Name of the Topic	Alcohols & phenols
Hours required	
Learning Objectives	prepn – properties of alcohols. classification of alcohols 1°, 2°, 3°. Bouveault – Blanc reduction – Oxidation of Diols – pinacol – pinacolone rearrangement. phenols – prepn, propts – acidic nature – factors affecting – Named reactions.
Previous Knowledge to be reminded	

Topic Synopsis: Compounds having –OH gr in alkanes are called alcohols.

R–H ⟶ R–OH. Nomenclature

CH_3-OH	methyl alcohol	monohydric alcohol
CH_3-CH_2OH	ethyl alcohol	Di hydric alcohol
$CH_3-CH(CH_3)-OH$	Isopropyl alcohol	Tri hydric alcohol
		poly hydric alcohol

classification: 1°-, 2°- and 3°- alcohols.

preparation methods of alcohols.

physical propts – Hydrogen bonding.

chemical properties: Esterification

$$R-OH + HO-\overset{O}{\overset{\|}{C}}-R' \xrightarrow[H_2SO_4]{conc.} R-O-\overset{O}{\overset{\|}{C}}-R' + H_2O$$

mechanism –

$$CH_3-\overset{O}{\overset{\|}{C}}-OH + HO-C_2H_5 \rightarrow CH_3-\overset{O}{\overset{\|}{C}}-OC_2H_5 + H_2O$$

Oppenauer oxidation: 2°- alc. reacts with Aluminium Isopropoxide in presence of acetone to give Ketones.

$$R_2CHOH + (CH_3)_2C=O \xrightarrow[\Delta]{[(CH_3)_2CHO]_3Al} R_2C=O + (CH_3)_2CHOH$$

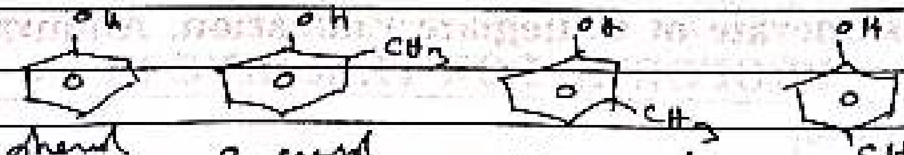
Oxidation with $KMnO_4$ and acidic dichromate.

Oxidation of 1°, 2°, 3°- alcohols with $KMnO_4$ and $K_2Cr_2O_7$ to give aldehydes, ketones and alkenes respectively.

pinacol – pinacolone rearrangement – mechanism

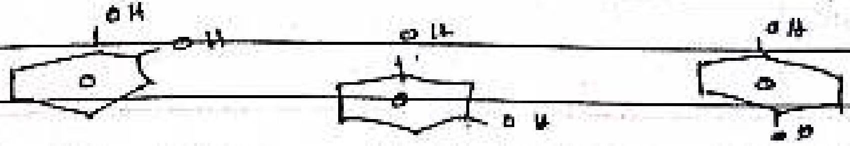
$$CH_3-\underset{OH}{\overset{CH_3}{C}}-\underset{OH}{\overset{CH_3}{C}}-CH_3 \xrightarrow{dil. H_2SO_4} H_3C-\underset{CH_3}{\overset{CH_3}{C}}-\overset{O}{\overset{\|}{C}}-CH_3$$

phenols, monohydric



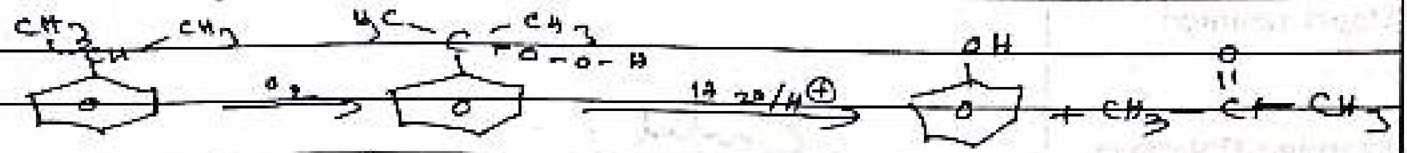
phenol o-cresol m-cresol p-cresol.

Dihydric



Catechol Resorcinol Quinol.

preparation of phenols. from cumene

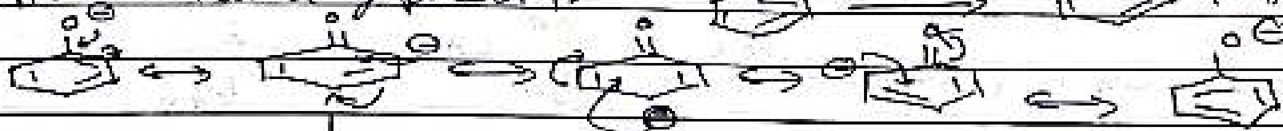


physical properties of phenols.

Higher B.P. due to Intermolecular H-bonding

- - O - H - - - O - H - - - O - H - - - - O - H - -
 | | | |
 ph ph ph ph

Acidic nature of phenols.



Examples / Illustrations	
Additional Inputs	
Teaching Aids used	
Reference cited	
Student Activity planned after the teaching	
Activity planned outside the class room if any	
Any other activity	

Signature of the Lecturer

Signature of the Department I/C

TEACHING PLAN (SYNOPSIS)

Month : Subject :

TOPIC : Paper :

Hours Required	
Learning Objectives	
Previous Knowledge to be reminded	
Topic Synopsis	

Debye - Hucked Theory of strong electrolytes:

① Relaxation effect & asymmetric effect,

② Electrophoretic effect

Debye - Hucked Onsager equation:

$$\lambda_v = \lambda_\infty - (A + B\lambda_\infty)\sqrt{c}$$

A and B are constants, c is concentration in gram-eq/lit.

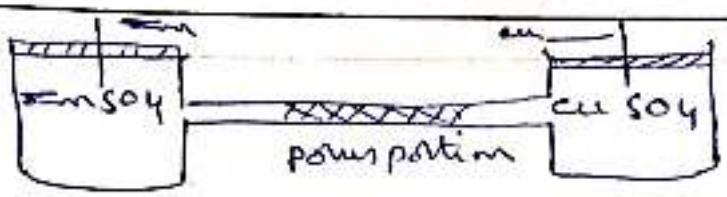
Electro chemical cells

Electrolytic cells	Electro chemical cells.
① converts electrical energy into chemical energy	converts chemical energy into electrical energy
② Both the electrodes are dipped in the same solution & made of the electrolyte	Two electrodes are immersed in seperate containers. Salt bridge is used as the connector
③ Anode is +ve and cathode is -ve.	Anode is -ve and cathode is +ve
④ Redox reaction are non-spontaneous.	Redox reaction are spontaneous
⑤ Work is done on the electrolytic cell.	Work is obtained from the type of cell

Thrust areas	
Skill to be learnt by Student	
Examples/Illustrations	
Additional Inputs	

Models used	
Aids used	
References cited	
Student Activity planned after the teaching	
Activity planned outside classes	
Any other	

Daniel cell:



Reversible and Irreversible cells:

Galvanic cell is a reversible cell.

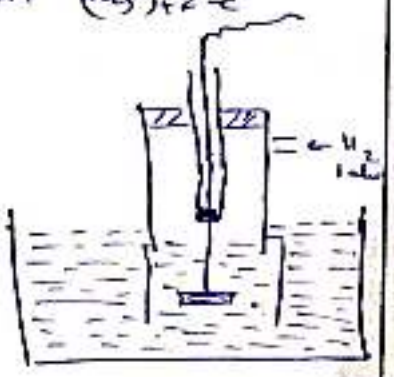
$$Zn \mid ZnSO_4 (a_1 M) \,||\, CuSO_4 (0.1 M) \mid Cu$$

Types of reversible Electrodes:

① metal - metal Ion type $Zn \rightleftharpoons Zn^{+2}(aq) + 2\bar{e}$

② Gas - metal ion type

③ Redox electrode.



Single electrode potential

Reference electrodes.

Hydrogen electrode (gas electrode)

Electrochemical series:

Nernst equation:

$$E^\circ_{cell} = \frac{2.303\,RT}{nF} \log K_c$$

$$E^\circ\,Cell = \frac{0.0591}{n} \log K_c$$

$$K_c = \frac{[Zn^{+2}(aq)]}{[Cu^{+2}(aq)]}$$

Gibbs Free Energy

$$\Delta G^\circ = -2.303\,RT \log K$$

Principal Incharge Lecturer

TEACHING DIARY FOR THE YEAR 202 - 202

Name of the Department / Subject :

Name of the Lecturer :

Month & Year : July 2025

S. No.	Date	Day	Class	Period / Time	Medium	Theory / Practical	Topic Covered	Methodology Adopted	No. of Students attended	Teaching Aids Used	Student Activity Conducted	Remarks
1	1/7/25	Sat	II BSc	5	E	pr	Cond. Analysis	Practical	11	BBC		
				6	E	pr	Compd. analysis	practical	11	BBC		
	2/7/25	Sun	← Holiday →									
2	3/7/25	Mon	II BSc	3	E	Th	Carbohydrates	Teaching	16	BBC		
3			II BSc	5-6 pm	E	Th	Epimerisation	Teaching	16	BBC		
4	4/7/25	Tue	← no class made →									
5	5/7/25	Wed	II BSc	1	E	Th	Interconversions	Teaching	14	BBC		
6			II BSc	5	E	pr	Compd. analysis	practical	11	BBC		
7			II BSc	6	E	pr	Compd. analysis	practical	11	BBC		
8	6/7/25	Thu	II BSc	3	E	Th	photo charts	Teaching	12	BBC		
9	7/7/25	Fri	II BSc	5	E	Th	HCl Vs NaOH conductometry	practical	17	practical		
10				6	E	Th	HCl Vs NaOH conductivity	practical	17	practical		
11	8/7/25	Sat	← no class made – Second Saturday – holiday →									
12	9/7/25	Sun	← holiday →									
13	10/7/25	Mon	[illegible]	[illegible]	[illegible]	Th	[illegible]					

14	11/7/23	Tue	←			No chemistry	Appeared ... (?)				
15	12/7/23	Wed	II BSc	1	E	Th	H_2+Cl_2 - Quantum yield	Teaching	14	BBC	
16				5	E	pr	HCl vs NaOH	checking	11	Lab	
17				6	E	pr	HCl vs NaOH		11	Lab	
18	13/7/23	Thu	II BSc	3	E	Th	Giant metallic crystals	Teaching	17	BBC	
19	14/7/23	Fri	II BSc	5	E	pr	conductivity HCl vs NaOH	practical	17	Lab	
20				6	E	pr	HCl vs NaOH	practical	17	Lab	
21	15/7/23	Sat	II BSc	5	E	pr	CH_3COOH vs NaOH	practical	15	Lab	
22				6	E	pr	CH_3COOH vs NaOH	practical	15	Lab	
23	17/7/23	Mon	II BSc	3	E	Th	phase rule - one component	Th	10	BBC	
24	18/7/23	Tue	No chemistry				→				
25	19/7/23	Wed	II BSc	1	E	Th	Kohlrausch law - Revision	Th	10	BBC	
26			II BSc	5	E	pr	conductivity - revision	pr	13	Lab	
27			II BSc	6	E	pr	conductivity - revision	pr	13	Lab	
28	20/7/23	Thu	II BSc	3	E	Th	Transport number	Theory	12	Lab	
29	21/7/23	Fri	II BSc	5	E	Th	practical Revision	pr	12	Lab	
30			II BSc	6	E	Th	practical Revision	pr	12	Lab	
31	22/7/23	Sat	II BSc	←		No chemistry	→				

Signature of the Lecturer

Signature of the Department In-Charge

Signature of the Princip

TEACHING DIARY FOR THE YEAR 202 - 202

Name of the Department / Subject :

Name of the Lecturer : Month & Year :

S. No.	Date	Day	Class	Period / Time	Medium	Theory / Practical	Topic Covered	Methodology Adopted	No.of Students attended	Teaching Aids Used	Student Activity Conducted	Remarks
31	24/7	Mon		Sem-		IV -	practical-examination	→		→		
32	25/7	Tue		No class work - NAAC work				→		→		
33	26/7	Wed		Sem-		IV	practical-examination	→		→		
34	27/7	Thu	←				NAAC work	→		→		
35	28/7	Fri	←				NAAC work	→		→		
36	29/7	Sat	←				NAAC work	→		→		
37	30/7	Sun		Sunday - Holiday				→		→		
38	31/7	Mon		Attendance Awareness on NAAC accreditation programme by Dr. K. Ankam Rao								

1	1/8/23	Tue	←	NAAC	work :	No classwork on account of NAAC work						
2	2/8/23	Wed	←		NAAC work							

Signature of the Lecturer

Signature of the Department In-Charge

Signature of the Principal

ANNUAL CURRICULAR PLAN

Name of the College : S.K.R.G.D.C. (Women)

Name of the Lecturer : Dr. Ch. V.V. Srinivas Class : III B.Sc., Year : III Paper : VIB

S. No.	Month	Week	Hours Available	Syllabus Topic	Additional Input / Value Addition Provided / taught	Curricular Activity				Co - Curricular Activity				Remarks
						Activity Conducted	Hours alloted	Whether conducted	if not, alternate date	Activity Conducted	Hours alloted	Whether conducted	if not, alternate date	
	November	3rd.												

Signature of the Lecturer

Signature of the Department In-Charge

Signature of the Principal

ANNUAL CURRICULAR PLAN (CHEMISTRY DEPARTMENT) 2022-'23 (Odd sem)

S.K.R.GOVERNMENT DEGREE COLLEGE FOR WOMEN, RAJAHMUNDRY — **CLASS & GROUP:** CBZ(T), CBZ & MPC (E), I, II, III B.Sc.,

NAME OF THE LECTURERS: 1. Dr. M. Sunitha, 2. Dr.Ch.V.V.Srinivas, 3. Smt. V.B.T.Sundari, 4. Smt.N.Swathi, 5. Smt. P.N.L.Prasanna

MONTH	PAPER	Hours available	Syllabus Topic	Additional Input/Value addition to be provided/taught	Curricular Activity				Co-Curricular Activity				Remarks
					Activity to be conducted	Hours allotted	Whether Conducted	If not alternate date	Activity to be conducted	Hours allotted	Whether Conducted	If not alternate date	
NOV.	I	4	Liquid state		Assignment	1	---	---	---	–	–	–	
	III	12	Chemistry of halogenated hydrocarbons, Alcohols & phenols		Assignment	1	Yes						
	VI B	7	Quantitative Analysis-1	Ground Water Analysis		1	Yes		Visited ground water department Dowlaiswaram	3+3	yes		
	VII B	7	Chromatography		Assignment		Yes						
DEC	I	15	Group- III,V& V, Solid State, Gaseous State		Assignment Student Seminar	1	Yes						
	III	19	Carbonyl compounds			1	Yes						
	VI B	13	Quantitative Analysis-2			1	Yes						
	VII B	13	TLC, Paper Chromatography			1	Yes						
JAN	I	10	Group V, VI & VII, d-block elements & Solutions		Assignment MID-I	1	Yes						
	III	15	Carboxylic acids and their derivatives										

	VI B	09	Treatment of Analytical data		Assignment MID-I	1								
	VII B	09	Column Chromatography											
FEB	I	14	f-block elements, Ionic equilibrium,		MID-II, Assignment Student Seminar	1	Yes		Guest lecture on Chromatographic Techniques					
	III	14	Spectroscopy			1	Yes							
	VI B	12	Separation Techniques			1	Yes							
	VII B	12	Spectroscopy			1	Yes							
MAR	I	10	Dilute solutions	-	-	-	-	-		.	.	.	.	
	III	10	Applications of Spectroscopy						Preparation of House hold Chemicals	3				
	VI B	06	Analysis of Water	Job Opportunities in pharma Industries										
	VII B	06	Atomic Spectroscopy			1	Yes							

SKR Government Degree College (W), Rajamahendravaram

Department of Chemistry 2022-2023

Programme & Course outcomes

Programme	Course	Programme outcomes
BSC	MPC& CBZ	1. Understand the environment functions and how it is in balance by human activities. 2. Acquire chemical knowledge to ensure sustainable use of the worlds resources and ecosystems services. 3. Engage in simple and advanced analytical tools used to measure the different types of pollution 4.Knowledge about the energy crisis and different aspects of sustainability. 5. Gain the knowledge of chemistry through theory and practicals
Semester	Name of the course	Course out comes
Sem-1	Inorganic and Physical Chemistry	Understand the basic concepts of p-block elements Explain the difference between solid, liquid and gases in terms of intermolecular interactions.
Sem-2	Organic & General Chemistry	Understand and explain the differential behaviour of organic compounds based on fundamental • Concepts learnt. Formulate the mechanism of organic reactions by recalling and correlating the fundamental • properties of the reactants involved Learn and identify many organic reaction mechanism including Free Radical Substitution, • Electrophonic Addition and Electrophonic Aromatic Substitution •Correlateanddescribethestereochemicalpropertiesoforganiccompoundsand reactions.
Sem-3	Organic chemistry & Spectroscopy	Understand preparation, properties and reactions of halcalkanes, halcarenes and oxygen • Containing functional groups. Use the synthetic chemistry learnt in this course to do functional group transformations. • To propose plausible mechanisms for any relevant reaction
Sem-4	Inorganic, Organic and Physic	To learn about the laws of absorption of light energy by molecules and subsequent photochemical reactions To understand the concept of quantum efficiency and mechanisms of photochemical reactions
Course 5	Inorganic & Physical Ch	Understand concepts of boundary conditions and quantization, probability distribution, most • probable values, uncertainty and expectation
Sem-5	Analytical Methods in Chemistry-1	Identify the importance of solvent extraction and ion exchange method Acquire knowledge on the basic principles of volumetric analysis and gravimetric analysis Demonstrate the usage of common laboratory apparatus used in quantitative analysis. Understand the theories of different types of titrations. Gain knowledge on different types of errors and their minimization
	Analytical Methods in Chemistry-2	Identify the importance of chromatography in the separation and identification of compounds in a mixture Acquire a critical knowledge on various chromatographic techniques. Demonstrate skills related to analysis of water using different techniques. Understand the principles of spectro chemistry in the determination of metal ions Comprehend the applications of atomic spectroscopy

UNIT -I

CHROMATOGRAPHY - INTRODUCTION AND CLASSIFICATION

1. What is Chromatography? How is it classified?

Chromatography is a technique to seperate thecompounds present in the mixture. It is based on the adsorption principal. This technique involves

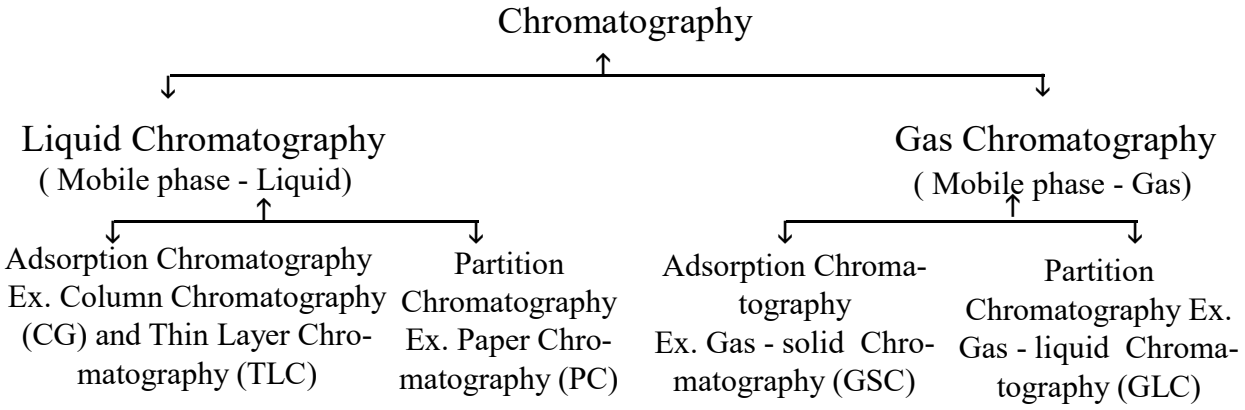
(1). Adsorption of compounds on the stationary phase (2). Desorption of compounds from the stationary phase by the mobile phase.

It is of two types

(a). Adsorption Chromatography;- In this technique components of the mixture are seperated basing on the adsorption phenomenon.

(b). Partition Chromatography;- In this technique components of the mixture are seperated basing on the distribution law.

Classification:- Basing on the state of the mobile phase used chromatographic methods are classified as follows.



2. How does the compounds in the mixture identified in paper chromatography technique?

Paper chromatography is one of the separating techniques based on partitial coefficient. It is a liquid chromatography technique in which stationary phase and mobile phase are liquids. In this technique water present in the whatmann paper is used as stationary phase. Mixer of water and polar organic solvent is used as mobile phase.

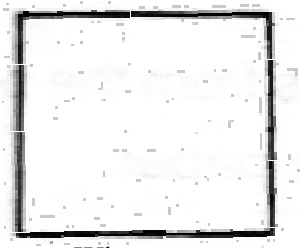
PRINCIPLE:- It is based on the distribution law. It is based on the principle that compounds with different distribution coefficients between the stationary phase and mobile phase will move different speeds on the stationary phase along with mobile phase. Hence, they canbe easily seperated.

Experimental Procedure:-

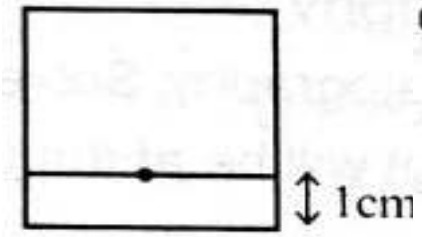
Stationary Phase:- Water present in the whatmann paper

Mobile Phase:- Mixture of polar organic solvents and water.

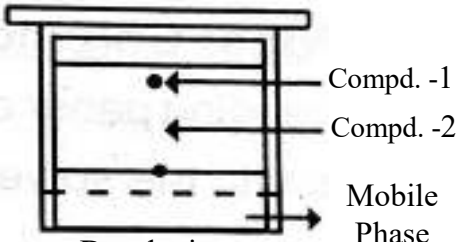
In this technique the sample containing compounds is spotted on the filter paper just above 1 cm. from the bottom. The paper is kept in the chromatography chamber containing organic solvent. The solvent rises by the capillary action and moves upwards on the paper. It pushes the compounds in the sample with different speeds while moving upwards. As a result these compounds are adsorbed at different places on the paper as bright spots.



Whatmann paper

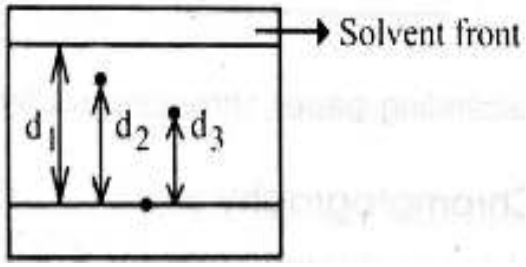


Spotting of paper



Developing of paper

The unknown compounds in the sample are identified by comparing teir Rf values with The Rf values of standard compounds.



Development of Paper

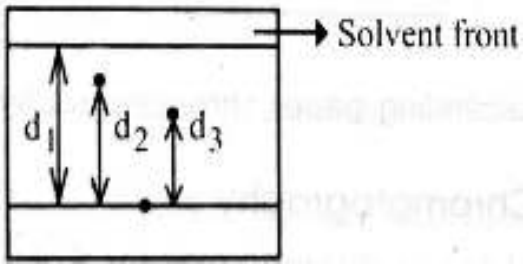
$$\text{Rf value of a compound} = \frac{\text{Distance travelled by the compound on the paper}}{\text{Distance travelled by the solvent front on paper}}$$

Uses:-

It is used (1). for the seperation of compounds of the sample which have different distributions betweenthe stationary phasse and mobile phase. (2). for knowing the unknown cpmpounds in a mixture.

3. What is Rf factor? What is its significance?

It is also known as retaradation factor. It is the ratif between the distance travelled by the compound on the TLC plate and the distance travelled by the solvent front on the TLC plate



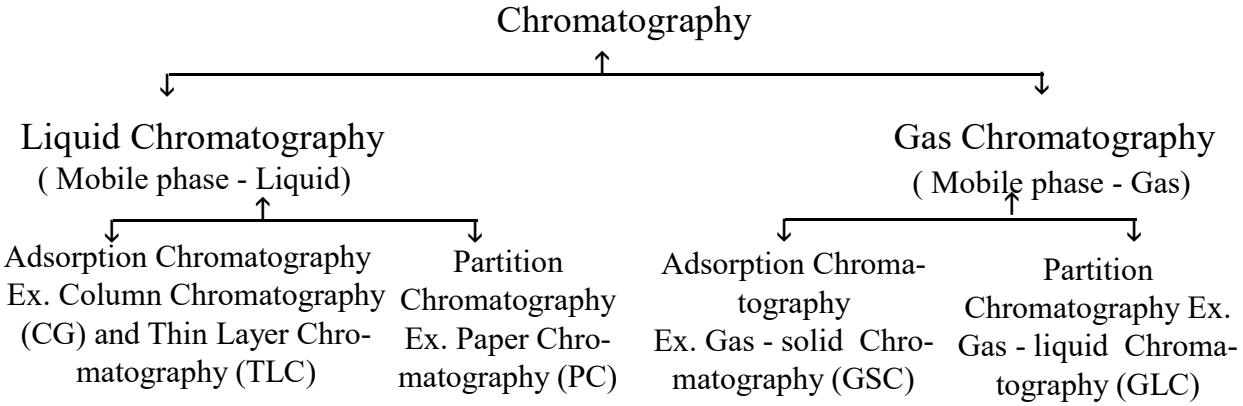
Development of Paper

$$\text{Rf value of a compound} = \frac{\text{Distance travelled by the compound on the paper}}{\text{Distance travelled by the solvent front on paper}}$$

It is an important physical property of a compound. It is useful to identify unknown compounds by compairing it's Rf factor withe the Rf factor of the standard compounds.

4. Write about mobile phases in chromatography?

A phase that moves is called mobile phase, it may be a liquid or gas. Classification based on the mobile phase.



5. What is eluotropic series?

The arrangement of solvents on the increasing order of polatiy is known as the "Eluotropic series".

UNIT -II

TLC AND PAPER CHROMATOGRAPHY

1. How does the compounds in the organic mixture seperated in the thin layer chromatography (TLC) technique?

Thin layer chromatography is one of the seperating techniques based on adsorption phenomenon. It is a liquid chromatography technique in which stationary phase is a solid and the mobile phase is a liquid. In this technique Silica Gel -G of Alumina -G is used as stationary phase. n-hexane or Benzene of Chloroform etc., is used as mobile phase.

PRINCIPLE:- It is based on the adsorption phenomenon. It is based on the principle that different compounds are adsorbed at different places on the stationary phaseof the TLC plate with different strenghts. These are desorbed by the mobile phase basing on their polarity.

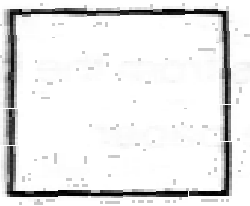
Experimental Procedure:-

Stationary Phase:- Silica gel-g, Alumina-G, Cellulose, etc.,

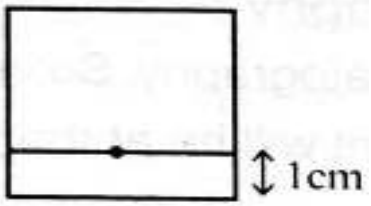
Mobile Phase:- n-hexane, Benzene, Chloroform, Methyl hexane etc.,

In this technique a thin layer of silica gel or alumina gel is coated on the glass plate. A dilute solution of the sample in chloroform or methyl alcohol or acetone is applied as a spot on the TLC plate just 1 cm above from the end of the plate. The spotted TLC plate is developed by keeping vertically in the TLC chamber containing few ml. of organic solvent such as chloroform or methyl alcohol or acetone. It must be slightly below the level of the spot on the TLC plate.

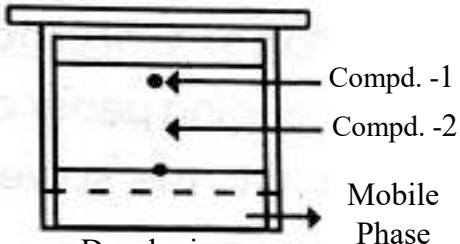
The solvent moves up the plate through the stationary phase by the capillary action. The solvent pushes the compounds in the sample moves up with the solvent with different speeds and get adsorbed at different places basing on their polarity as bright spots. After the solvent front is reached, the TLC plate is taken out of the chamber and marking is done onthe solvent front with a pen. Then the plate is dried until solvent is evapourated.



Silica gel coated TLC plate



TLC plate with sample spot



Developing of paper

The no. of spotss produced on the TLC plate give no. of compounds in the mixture. The compounds in the sample are known by comparing the Rf factor of the spots with the Rf factor of the known compounds. The spots on the plates are scrapped and leached by using organic solvents for the seperation of compounds. **USES**:- It is used (i). to determine the no. of compounds in a mixture. (ii). to identify an unknown compound in the mixture (iii). to seperate the compounds in the mixture.

2. What are ascending and descending paper chromatography?

Ascending Paper Chromatography:-

.

Nitro Alkanes

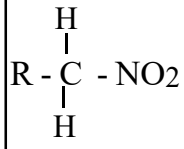
1. What are Nitro Alkanes? How are they classified?

Compounds with general formula R-NO_2 are called nitro alkanes.

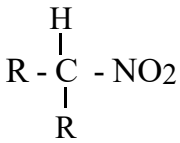
Ex. CH_3-NO_2 CH_3-CH_2-NO_2 CH_3-CH(-NO_2)-CH_3

Nitro Methane Nitro Ethane 2-nitro Propane

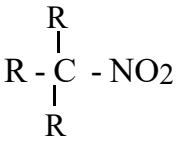
They are classified into primary, secondary and tertiary nitro alkanes.



primary



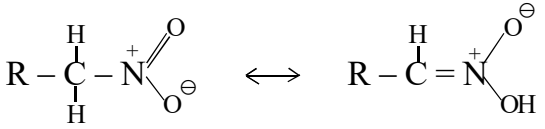
secondary



tertiary nitro alkanes

2. Explain tautomerism exhibited by nitro alkanes.

Isomers formed by transfer of protons are called tautomers. Like keto compounds, primary and secondary nitro alkanes undergo tautomerism. They form nitroform and aci forms. The aci forms of primary and secondary nitro alkanes form salts with strong bases. Tertiary nitro alkanes does not show tautomerism.



Nitro form Aci form

3. Write any three methods of preparations of nitro alkanes.

a) By direct nitration of alkanes

$$CH_3 - H + OH - NO_2 \xrightarrow[400^0C]{\Delta} CH_3 - NO_2 + H_2O$$

b) By the reaction between Alkyl halide and silver nitrite

$$CH_3I + AgNO_2 \longrightarrow CH_3NO_2 + AgI$$

c) By the reaction between chloroacetic acid and sodium nitrite

$$Cl{-}CH_2{-}COOH + NaNO_2 \longrightarrow NaCl + NO_2 - CH_2 - COOH$$

$$NO_2 - CH_2 - COOH \xrightarrow[-CO_2]{\Delta} CH_3 - NO_2$$

4. Explain the following reactions?

(a). Halogenation (b). Michael condensation reaction

(c). Mannich reaction (d).Reaction with nitrous acid

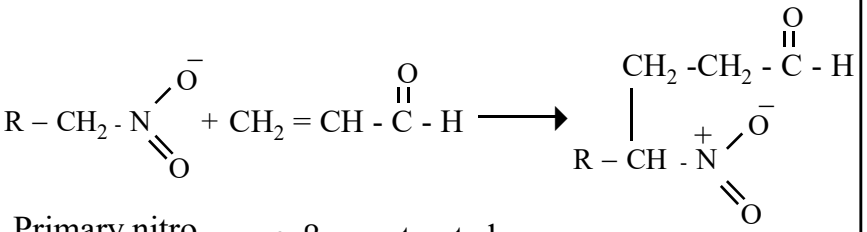
(e). Nef reaction

(a). Halogenation:- 1^0 and 2^0 nitroalkanes undergoes α - halogenation

$$3Cl_2 + 3NaOH + CH_3 - NO_2 \longrightarrow CCl_3 - NO_2 + 3NaCl + 3H_2O$$

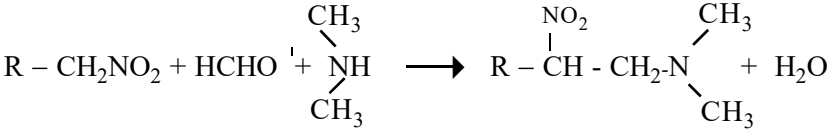
Chloropicrin (insecticide)

b). Michael condensation reaction :- Nitro alkanes undergo addition reaction with α,β -unsaturated carbonyl compounds, α,β -unsaturated nitro compounds, α,β -unsaturated esters. This reaction is called Michael condensation reaction.



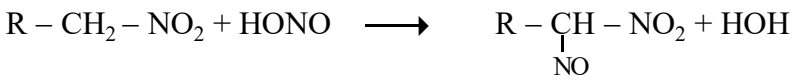
Primary nitro alkanes — α,β -unsaturated carbonyl compound

(c).Mannich reaction:-The condensation reaction between Nitroalkanes, formaldehyde and salts of Ammonia or 1^0 amine or 2^0 amine is known as mannich reaction

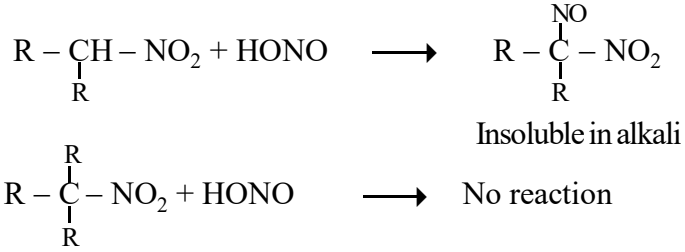


Formal-dehyde — Dimethyl amine

(d).Reaction with nitrous acid :- Primary and secondary nitro alkanes react with nitrous acid and give blue coloured nitroso derivatives



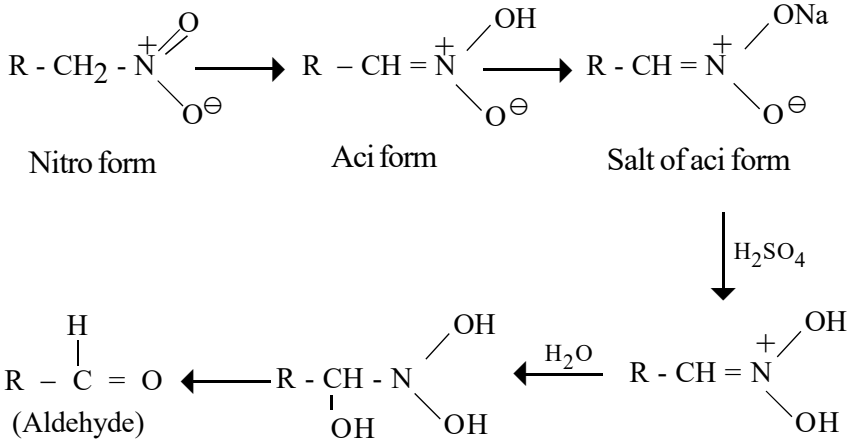
Soluble in alkali



Insoluble in alkali

No reaction

(e). Nef reaction:- Salts of Aciform of primary and secondary nitro alkanes on hydrolysis with sulphuric acid gives aldehydes and ketones.This reaction known as Nef reaction.



Nitro form — Aci form — Salt of aci form

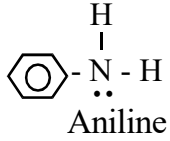
(Aldehyde)

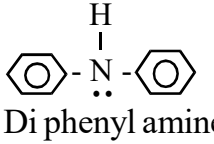
NITROGEN COMPOUNDS

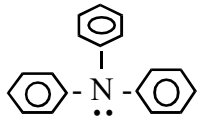
AMINES

1. What are amines? How are they classified?

Organic compounds with general formula R-NH2 are called Amines. Ex. Methyl amine (aliphatic) and Aniline (aromatic). These are classified into three types. They are

(a). Primary amines ($R\text{-}NH_2$), $CH_3\text{-}NH\text{-}H$ Methyl amine;  Aniline

(b). Secondary amines ($R_2\text{-}NH$) $CH_3\text{-}NH\text{-}CH_3$ Dimethyl amine;  Di phenyl amine

(c). Tertiary amines ($R_3\text{-}N$) $CH_3\text{-}N(CH_3)\text{-}CH_3$ Trimethyl amine;  Tri phenyl amine

2. How are the aliphatic amines prepared?

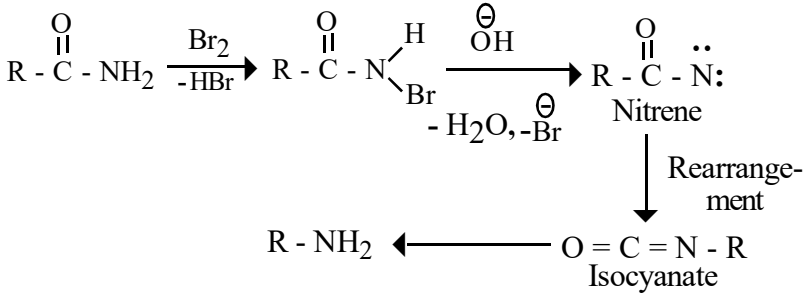
Preparation methods :-

i) **Hoffman's degradation :-** Amides on treatment with Bromine in alkali gives amines. This reaction is known as Hoffman's degradation reaction.

$$CH_3CONH_2 + Br_2 \xrightarrow{KOH} CH_3NH_2$$

Methyl amine

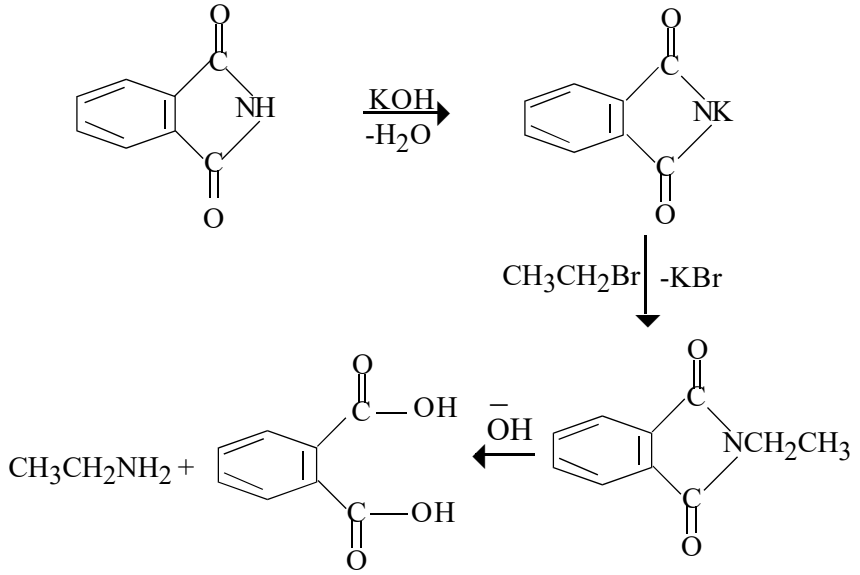
Mechanism:-



ii) **Schmidt Reaction :-** Carboxylic acids on treatment with hydrazoic acid in presence of sulphuric acid gives amines. This reaction is known as schmidt reaction.

$$CH_3\text{-}C(=O)\text{-}OH + N_3H \xrightarrow{H_2SO_4} CH_3\text{-}NH_2$$

iii) **Gabrieal Synthesis :-** In this method, N-alkyl phthalimide on basic hydrolysis gives 1^0amines



iv). Ammonolysis of alkyl halides:- In this method alkyl halides are treated with ammonia.

$$CH_3\text{-}Cl + NH_3 \longrightarrow CH_3\text{-}NH_2 + HCl$$

Primary

$$CH_3\text{-}Cl + CH_3\text{-}NH_2 \longrightarrow CH_3\text{-}NH(CH_3)\text{-}CH_3 + HCl$$

Secondary

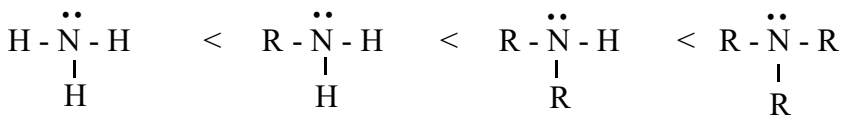
$$CH_3\text{-}Cl + CH_3\text{-}NH\text{-}CH_3 \longrightarrow CH_3\text{-}N(CH_3)\text{-}CH_3 + HCl$$

Tertiary

3. Explain the basic character of Amines.

Amines are basic. According to lewis theory, electron pair donor is a base. As amines are electron pair donors, they are basic. The strength of the basic character of amines depends upon its ability to donate its electron pair. The more the tendency of donating electron pair by the amines, the more is their basic character.

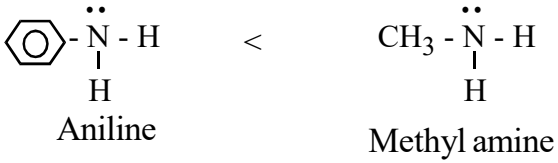
Tertiary amines are less basic than secondary amines.



Alkyl groups, through their inductive effect, increases the electron density on the nitrogen in amines. As a result, amines freely donate electron pair to others. Hence, they are more basic than ammonia. That is why, 1^0 amine is more basic than ammonia, 2^0 amine is more basic than 1^0 amine. Similarly, 3^0 amine is expected to be more basic than secondary amine but its is not so.

It is less basic than 2^0 amine. This is because of steric hinderance. Due to steric hinderance, the electron pair present on 3^0 amine is not available for protonation. Hence, 3^0 amine is less basic than 2^0 amine.

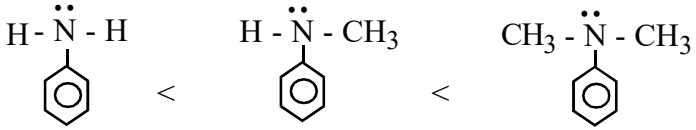
Aromatic amines are less basic than aliphatic amines



Aromatic amines are less basic than aliphatic amines. Because in aromatic amines, the electron pair present on the Nitrogen atom involves in the resonance. Due to involvement of electron pair in the resonance. This electron pair is not available for donation. Hence, aromatic amines are less basic than aliphatic amines.

4. Why N, N dimethyl aniline is more basic than aniline ?

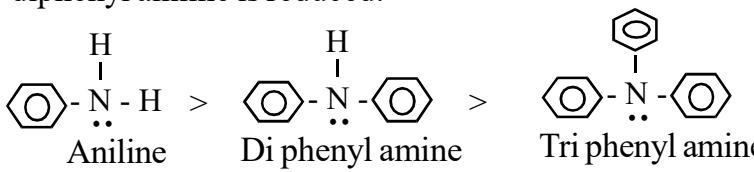
Due to electron releasing methyl groups, the electron density on the nitrogen atom of N, N dimethyl aniline increases. Hence, the electron pair, present on the nitrogen atom of N, N dimethyl aniline is more available than the electron pair present on the nitrogen atom of aniline. Hence, N, N dimethyl aniline is more basic than aniline.



5. Why Aniline is more basic than N,N diphenyl aniline ?

N,N-diphenyl aniline is less basic than aniline because in N, N-diphenyl aniline, the delocalisation of electron pair is more than aniline. Hence, the electron pair is less available for donation than aniline. Hence, N, N-diphenyl aniline is less basic than aniline.

In other words, due to delocalisation of electron pair present on the Nitrogen over the two phenyl rings, the basic character of N, N -diphenyl aniline is reduced.



4. Write any THREE properties of aliphatic amines.

1.**Reaction with alkyl halides (Alkylation):** 1^0 amines on treatment with alkyl halides give N-alkyl amines.

$$CH_3.NH_2 + CH_3Cl \longrightarrow CH_3\overset{CH_3}{\underset{|}{N}}H + HCl$$

2.**Acetylation :(Acylation)** 1^0 amines on reaction with acid chlorides give N-substituted amides.

$$CH_3 - \overset{O}{\overset{||}{C}} - Cl + CH_3 - NH_2 \longrightarrow CH_3 - \overset{O}{\overset{||}{C}} - NHCH_3 + HCl$$

3.**Reaction with nitrous acid :-**

a) Primary amines with Nitrous acid produce Nitrogen gas (as bubbles)

$$CH_3 - CH_2 - NH_2 + HONO \longrightarrow N_2 + H_2O + CH_3 - CH_2 - OH$$

b)Secondary amines with nitrous acid produce yellow oily layer.

$$CH_3 - CH_2 - \underset{|}{\overset{R}{N}}H + HONO \longrightarrow CH_3 - CH_2 - \underset{|}{\overset{R}{N}} - NO$$

c) Teritiary amines with nitrous acid form soluble nitrite salts

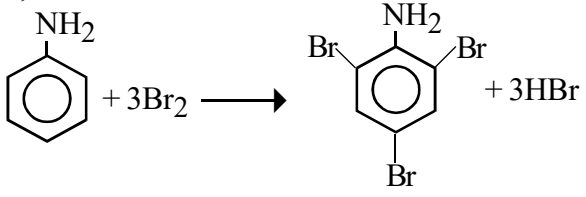
$$(CH_3CH_2)_3N + HONO \longrightarrow (CH_3 - CH_2)_3\ \overset{+}{N}H\overset{-}{O}NO$$

This reaction is used as a basic test to distinguish 1^0, 2^0 & 3^0 amines.

5. Discuss the properties of aromatic amines.

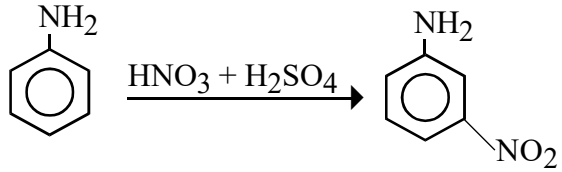
(i). Electrophilic substitution reactions:-

a) Bromination : aniline on treatment with Bromine water gives 2,4,6-tribromo aniline

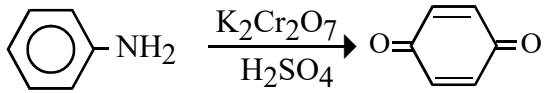


2,4,6 - Tribromo aniline

b) Nitration : aniline on reaction with mixture of con. HNO_3 and H_2SO_4 gives meta-nitro aniline

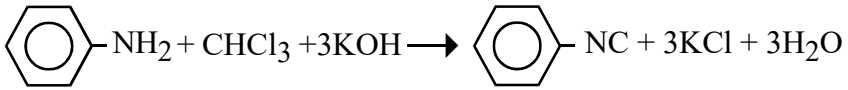


ii). Oxidation:- Aniline undergoes oxidation with $K_2Cr_2O_7$ to gives p-Benzoquinone.

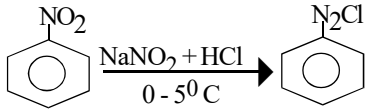


p - Benzoquinone

iii). Carbylamine reaction :-Primary amines react with chloroform in alkali gives isocyandies. This reaction is known as phenyl isocyanide reaction.



iv). Diazotisation :- The conversion of aromatic primary amines in to diazonium salts is known as diazotisation



6. Explain Hinsberg method for the seperation of amines.

In this method, the mixture of amines is treated with benzene sulphonyl chloride and shaken with 5 percent caustic potash solution.

Primary amine forms alkyl benzene sulphonamide, which dissolves in caustic potash forming potassium salt. Secondary amine forms dialkyl sulphonamide, which does not dissolve in caustic potash. Tertiary amine does not react with benzene sulphonyl chloride.

$$C_6H_5SO_2Cl + HNHR \xrightarrow{-HCl} C_6H_5SO_2NHR \xrightarrow[-H_2O]{KOH} C_6H_5SO_2NKR$$

Benzene sulphonyl chloride; pr.amine; Mono alkyl sulphonamide; Pot.salt (soluble in water)

$$C_6H_5SO_2Cl + HNR \xrightarrow{-HCl} C_6H_5SO_2NR \xrightarrow{KOH} \text{No action}$$

sec.amine; Dialkyl sulphonamide insoluble in water or KOH;soluble in ether

$$C_6H_5SO_2Cl + NR_3 \longrightarrow \text{No action}$$

tert.amine (soluble in ether)

The entire product, thus obtained, is extracted with ether. Tertiary amine and dialkyl benzene sulphonamide being insoluble in water, pass over to the ethereal layer. Potassium alkyl sylphonamide remains in the aqueous layer. The aqueous and the ethereal layers are then seperated.

The aqueous layer (containing $C_6H_5SO_2NKR$) is acidified with dilute hydrochloric acid, alkyl benzene sulphonamide is produced. It is next heated with concentrated hydro chloric acid.

Monoalkyl benzene sulphonamide gets hydrolysed and forms the hydrochloride of primary amine. The latter is distilled with caustic soda to regenerate primary amine.

$$C_6H_5SO_2NKR + HCl\ (dil.) \longrightarrow C_6H_5SO_2NHR + KCl$$

Pot.alkyl sulphonamide; Monoalkyl sulphonamide

$$C_6H_5SO_2NHR + H_2O \xrightarrow{Conc.HCl} C_6H_5SO_2.OH + RNH_2.HCl$$

Benzene sulphonic acid

$$RNH_2.HCl + NaOH \longrightarrow RNH_2 + NaCl + H_2O$$

Hydro chloride of pri.amine; pri.amine

For the recovery of tertiary and secondary amines, the ethereal layer is fractionally distilled. Tert.amine passes over leaving behind the solid dialkyl benzene sulphonamide. The latter is hydrolysed by concentrated hydrochloric acid and then distilled with caustic soda to get secondary amine.

$$C_6H_5SO_2NR_2 + H_2O \xrightarrow{Conc.HCl} C_6H_5SO_2.OH + RNH.HCl$$

Dialkyl sulphonamide

$$RNH.HCl + NaOH \longrightarrow RNH + NaCl + H_2O$$

Hydrochloride of sec.amine; sec.amine

VALUE ADDED COURSE

ON

HOUSE HOLD CHEMICALS

S.K.R.GOVERNMENT DEGREE COLLEGE (W)
RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

2022-2023

From

Dr.M.Sunitha,

Incharge of the Department of chemistry,

S.K.R.Government Degree College (W),

Rajamahendravaram.

To

The Principal,

S.K.R.Government Degree College (W),

Rajamahendravaram.

Sub: To start Value added course on "House Hold Chemicals" submitting Proposals regarding...

Respected madam,

We the Department of Chemistry planned to start value added course for II year B.Sc students from 02/01/2023 to 01/03/2023 i.e., 2 months course (36 hrs.) on House Hold chemicals.

We are going to start in the academic year 2022-23 i.e., 02/01/2023 to 01/03/2023. So this is our humble request to permit us for conducting the above course.

Thanking you madam,

M. Sunitha

Dr.M.Sunitha

Dr. M. Sunitha
I/c Lecturer in Chemistry
S.K.R. Government Degree College (W)
RAJAMAHENDRAVARAM.

P. [signature]

Principal

PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM.
East Godavari Dist., Andhra Pradesh

SKR GOVT.DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE- 2022-23

REPORT:

As a part of academic activity, the department of chemistry has conducted Value added course in 'House Hold Chemistry' from 2.01.2023 to 02.03.2023 for the academic year 2022-2023. The important objective of the course is to improve basic knowledge of preparation of house hold chemicals and their need in day to day life. It is very economic and useful to every common man.

The Chemistry faculty member have engaged classes for 36 hrs. At the end of the course, an external examination with multiple choice questions has conducted for the assessment of learners understanding levels of knowledge .The minimum qualifying of marks for the award of certification is 40%. All the students completed the course successfully and got certificates during the academic year 2022-2023.

SKR GOVT.DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE- 2022-23

The faculty members of the Chemistry department met in the Principal chamber to discuss and to review the conduct of the Value Added course titled "**House hold Chemicals**" under the chairman ship of the Principal and the faculty of the department of Chemistry on 20 .12.2022.

AGENDA:

Starting of Value Added Course for II B.Sc., students.

RESOLUTIONS:

(1) It is resolved to start the Value Added Course titled "**House hold Chemicals"** from 02.01.2023 (36 hrs duration) for the academic year 2022-2023.

(2) It is also resolved to frame the syllabus, regulations for the successful completion of the certificate course titled "**House hold Chemicals".**

(3) Enrolled 30 students for this course.

(4) Resolved to conduct classes from 4.30 PM onwards in the college campus.

(5) Resolved to conduct exam after completion of the course and issue certificates to qualified candidates.

(6) Qualifying mark is 40 %.

MEMBERS PRESENT:

1

2

3

4

5 N.S.V. Sravani

(Dr.M.Sunitha)
SIGNATURE

Dr.P.RaghavaKumari
Principal

PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM.
East Godavari Dist., Andhra Pradesh.

CIRCULAR

DATE 21.12.2022.

This is to inform that the Department of Chemistry is going to conduct Value added course from 02.01.2023 to 11.03.2023 for Second year students of B.Sc C.B.Z., on **"House hold Chemicals"** preparations. The students who are interested can enroll their names in the department of Chemistry on or before 27.12.2023. The duration of the course is 2 months (36 Hrs). The candidates who secure 40% of the marks in the examination will get the certificate.

M. Sunitha

(Dr.M.Sunitha)

Incharge of the Department

SKR GOVT.DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE- 2022-23

LIST OF STUDENTS ENROLLED

"HOUSE HOLD CHEMICALS"

S.No.	Name of the student	Hall ticket number
1.	Bade Mahalakshmi	210907101002
2.	Bandaru Naga Srujana Kanaka Mahalakshmi	210907101003
3.	Ganneti Baby	210907101007
4.	Gavara Uma Bhanu Naga Sridevi	210907101008
5.	Kakuri Rama Lakshmi	210907101013
6.	Madakam Ramulamma	210907101018
7.	Pamparaboyina Siri	210907101019
8.	Karam Vishnavi	210907110112
9.	Karri Bhanu Prasanna	210907110113
11.	Kondapalli Mrudula Devi	210907110116
12.	Kotla Kameswari	210907110118
13.	Kote Naga Lakshmi	210907110120
14.	Kulla Sridevi	210907110121
15.	Madam Sravani	210907110128
16.	Mohhammed Soha Alia	210907110131
17.	Muchi Ranjitha	210907110133
18	Mulavada Charmila	210907110134
19.	Pallala Hema Latha Reddy	210907110139
20.	Poluju Priyanka	210907110140
21.	Potula Gnana Roopa Sri	210907110141
22.	Pyla Revathi	210907110142
23.	R Nandini	210907110143
24.	Relangi Navya Sridevi	210907110144
25.	Sode Ishwarya	210907110152
26.	S Nagajyothi	210907110153
27.	S Neeraja	210907110154
28.	Tupuri Shanthi	210907110159
29.	Uppu Deepika Sravanthi	210907110160
30.	Yandamuri Prasanna Sai Amrutha	210907110165

DEPARTMENTOF CHEMISTRY

VALUE ADDED COURSE

"HOUSE HOLD CHEMICALS"

Objective of the course : To make the students well acquainted with the knowledge of preparation of house hold chemicals and their need in day to day life. It is very economic and useful to every common man.

Course duration : 36 hrs
Level : UG
Course type : Scheduled
Certification: Certification will be given on the continuous comprehensive evaluation of students performance in the learning activities.

SYLLABUS OF THE COURSE

Contact Hrs: 36

UNIT I (9 Lectures)

Household chemicals: History of household Industry, Basic Theory of Household Chemicals,and Raw material required for household product, Product manufacture in household industry.Role of household product in day to day life.

UNIT II (9 Lectures)

Cleaning agents: Introduction, synthesis and applications of Natural cleaning agents, cleaning action, Floor cleaner, Toilet Cleaner, Bathroom Cleaner, Kitchen Cleaner

UNIT III (9 Lectures) Detergents and surfactants: Introduction; Different terms used in detergents; Raw materials for detergents; Washing action of detergents; Types of detergents; Introduction of surfactants; Types of surfactants.

UNIT IV (9 Lectures)

Detergents and surfactants:

Technology of Soap: Chemistry of soap; Raw material for soap industry and their selection; hard fats yielding and oil yielding soaps; Chemical reactions of soaps; Hard and Soft soaps; Plant and process employed in soap manufacture; Liquid hand wash and liquid dish wash.

Recommended Books: (Unit wise)

1. Small scale industries and house hold industries in developing economy by Shetty M.C. (Unit I)

2. Manufacture of perfume cosmetics and detergents by Prasad Giri Raj (Unit V)

3. Industrial chemistry by B.K.Sharma (Unit I and II)

4. Flavours & Essential oils, Industries SBP Board (Unit III)

5. Perfumes soaps & cosmetics by Poucher. (Unit III)

6. Manufacture of perfumes, cosmetics and detergents by Giriraj Prasad (Unit IV)

7. Manufacture of perfumes, cosmetics and detergents by Prasad. (Unit IV)

Learning Outcomes:

Unit I Household Chemicals

1. The students should learn fundamentals household chemicals.

2. The students should define house hold products, various processes of household products

3. The students should explain preparations and reactions of household chemicals, history of household products.

Unit II Cleaning agents

1. The students should learn fundamentals of various cleaning agents.

2. The students should define natural, floor, toilet, bathroom and kitchen cleaning agents

3. The students should explain preparations and reactions of natural, floor, toilet, bathroom and kitchen cleaning agents

Unit III Technology of Soap

1. The students should learn technology of soap
2. The students should define soap, hard and soft soap, liquid soap
3. The students should explain preparations and reactions of soap, liquid soap

Unit IV Detergents and surfactants

1. The students should learn fundamentals of detergents and surfactants
2. The students should define detergents, surfactants
3. The students should explain preparations and various types of detergents and surfactants

Practical Course: Preparation of various household Products

Contact Hrs...

1. Preparation of Washing Powder
2. Preparation of Homemade Soap
3. Preparation of Cleaning Powder
4. Preparation of Vaseline
5. Preparation of Pain Balm
6. Preparation of Phenyle

Project course: Project on Preparation of household Chemicals

S.K.R GOVERNMENT DEGREE COLLEGE(W) RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE/VALUE ADDED COURSE

HOUSE HOLD CHEMICALS

S.No.	Regd.no	Name of the student	Signature of the student
1.	210907101002	Bade. Mahalakshmi	B. Mahalakshmi
2.	210907101003	Bandaru.N.S.K.Mahalakshmi	B.N.S.K.Mahalakshmi
3.	210907101007	Ganneti. Baby	G. Baby
4.	210907101008	Gavara Uma B Naga sri devi	G.U.B.N. Sridevi.
5.	210907101013	Kakuri Ramalakshmi	K. Ramalakshmi
6.	210907101018	Madakam Ramulamma	M. Ramulamma
7.	210907101019	Pamparaboyina Siri	P. Siri
8.	210907110112	Karam Vaishnavi	K. Vaishnavi
9.	210907110113	Karri Bhanu Prasanna	K B Prasanna
10.	210907110116	Kondapalli Mrudula devi	K. Kameswari Mrudula devi
11.	210907110118	Kotla Kameswari	K. Kameswari
12.	210907110120	Kote Nagalakshmi	K. Nagalakshmi
13.	210907110121	Kulla Sridevi	K. Sridevi
14.	210907110128	Madam.Sridevi	M. Sridevi
15.	210907110131	Md.Soha Alia	md. Soha alia.
16.	210907110133	Muchi.Ranjitha	M. Ranjitha
17.	210907110134	Mulavada Charmila	M. Charmila
18.	210907110139	Pallala Hemalatha reddy	~~P. Priyanka~~ P. Hemalatha
19.	210907110140	Poluju Priyanka	P. Priyanka
20.	210907110141	Pothula.Gnana Roopa sri	P.G. roopa sri
21.	210907110142	Pyla Revathi	P. Revathi
22.	210907110143	R.Nandini	R. Nandini
23.	210907110144	Relangi.Navya sridevi	R. Navya Sridevi

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Poucher's Perfumes, Cosmetics and Soaps

10th Edition

Edited by

Hilda Butler
Editor and Consultant to the Cosmetic Industry

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Preface to the 9th Edition

Cosmetic Science has developed greatly since the publication of the 8th edition of this textbook in 1974. Although the first part of this volume still consists of chapters about product preparations in alphabetical order, each product category has been revised and updated by a specialist. An outline of the biology, structure and function of skin, hair, teeth and nails and the reasons for the need for cosmetics are given in those dealing with the relevant preparations. Throughout, the word Cosmetics includes toiletries and thus all products which protect, cleanse, adorn, and perfume the human body, and combat body odour and perspiration.

The 'f' spelling for the element 'sulfur' and its derivatives has been used following the recommendations of the International Union of Pure and Applied Chemistry (IUPAC) and the decision taken by the Royal Society of Chemistry (RSC) and the British Standards Institute (BSI) to use 'f' instead of 'ph' in all their publications. This stems from the derivation of the use of the 'f' from Latin and its use in England until the 15th century.

Deionized water has been used in the formulations because many manufacturers standardize the water supply to the factory by removing cations and anions by exchange resin treatment. This lessens the variation in ionic content which can occur in the mains water. A typical design for a water supply of constant quality in factories, which can be tailored to fit local conditions, was described for the Max Factor Company by N. Wheeler and J. Kilsheimer in the Water Documentary issue of *Cosmetic and Toiletries* in 1983. The properties of the water supply and its treatment are also discussed elsewhere, especially in Chapter 15, page 403 and Chapter 21, page 595.

In most formulae the quantities for preservatives and perfume are indicated by 'q.s.'– *quantum sufficit*. It would be unwise to be more exact when the actual quantities depend on the results of research on each formulation where differing raw materials, methods and conditions of production will occur. In some formulae the main ingredients already add up to 100 and the preservatives and perfume appear as extras – q.s. When these two are determined as a result of tests and the two quantities are significant then an equivalent amount can be deducted from the largest ingredient present to maintain the total at 100.

These tests at the development stage will be described by the chapters in the second part and give an idea of the research needed to produce a safe, stable and successful product which is acceptable to Governments and Consumers alike. This would have been appreciated by Poucher who at the end of the preface to the 6th edition, advised: 'keep the formulations simple' and 'give the experiments long shelf tests, with frequent observations before finally approving a formula'.

In a previous volume Poucher included a historical sketch. This has been retained and brought up to date in the present edition, followed by a chapter of advice on perfuming products, and finally one on the psychology of fragrance. My thanks are due to the authors who have spent so much time and trouble in providing their contributions; and to all others who have helped to make this book possible.

Hilda Butler, Editor
1992

Foreword to the 9th Edition

There can be no doubt as to the importance of cosmetics and cosmetic science – this edition of *Poucher's Perfumes, Cosmetics and Soaps* is at once powerful evidence of the importance of its subject and of the detailed study of its applications. Cosmetics are as old as mankind itself. Even in the most primitive societies the use of deodorants and decorative cosmetics was universal, and the same basic objectives remain unchanged today although the means employed to further them are now far more complex and are scientifically based and controlled.

The importance of the subject fully warrants the increasing attention being paid to it in recent years and this new edition of Poucher illustrates both the advances made to date and direction of further progress. Mrs Hilda Butler is to be congratulated on her provision of a volume both practical and fascinating as well as comprehensive and I commend it not just to the practitioners of cosmetic science but to all chemists interested in the practical development of their science.

Lord Todd OM, FRS
Cambridge, 1992

Editor's note: Lord Todd retired as patron of the Society of Cosmetic Scientists in 1996 after giving his support for a number of years and died on January 10th, 1997.

Foreword 2000

Having been asked by Hilda Butler to write a forward to this tenth edition of my late father's *Perfumes, Cosmetics and Soaps,* I thought it would be instructive to re-examine my copy of the first edition of this work published in 1923 by Chapman and Hall entitled *Perfumes and Cosmetics.*

I was surprised to find that it contained seventeen advertisements, presumably to lower the cost of production, from suppliers of raw materials, machinery and a journal, *Perfumery & Essential Oil Record* (well known in the industry then and for many years after).

Although, in Poucher, the first part, a dictionary of raw materials, contained cosmetic as well as perfume materials (150 pages), the section (part 3) on cosmetics products with descriptions and formulae occupied 120 pages, while in the middle section 160 were devoted to monographs on essential oils, methods of extracting them and formulae for fragrances using them. A review in the *Chemist and Druggist* stated: 'The book is a good one. The matter is sound and practical, the get-up and illustrations are excellent, and it is quite free from gross errors, a thing that can hardly be said of nearly every book on perfumery that has appeared in late years. We cordially recommend it to all interested in practical perfumery.'

One of my late father's aims was to make cosmetics less costly so that they would be available to women in all walks of life, whereas at the time they were on the whole too expensive for all but the wealthier members in society.

It might surprise present readers that he was the author of another book on Cosmetics, titled *Eve's Beauty Secrets,* published in 1926 by Chapman and Hall, in which he explains in non-technical language what cosmetic products are suitable for various skin types and how and when women should use them to enhance their appearance. In a review that appeared in the *American Perfumer* I find the following extract very revealing: 'Copies of this little book should be in the hands of those who at present are seeking to restrict and hamper the toilet preparations industry by the passage of state legislation. A copy on file in the New York Department of Health for the use of certain officials in their leisure moments would do much to keep them out of mischief'.

I spent nearly forty years in the industry and, though not a perfumer myself, was taught by perfumers to identify the odour of essential oils and other raw materials. Neither am I a cosmetic chemist, and therefore the technicalities of

this branch of science is a closed book to me. However I do realise that the number of new raw materials coming on to the market and the global expansion of the industry has given rise, of necessity, to the increasing complexity of today's regulations on safety, quality etc., which means that it is imperative for the information in this treatise to be as up-to date as possible, and undoubtedly Mrs Butler has seen that it has been revised to meet this challenge.

I commend this new edition to all cosmetic chemists and others who are interested in the art and science of cosmetics.

John Poucher
Cockermouth, Cumbria
January, 2000

Contents

PART 1 HISTORICAL BACKGROUND

in chemical composition to the natural isolates: the 'menthol molecule' is one. The result is a product which is 100% pure and exactly reproducible for each delivery made to the buyer. Unfortunately today the modern consumer, having an inordinate fear of anything 'chemical', demands natural oils, unaware that everything is 'chemical' and the application of science can offer many more guarantees of purity and safety for simple synthetics.

Still in 1923, Poucher goes on to say that 'Synthesis as a natural sequence follows analysis and while the synthetics may not exactly reproduce the fragrance of the natural flower they certainly attain a close approximation. Furthermore the wide range of synthetic chemicals enables the perfumer to create new odours.'

The volume was divided into three parts, each of which became a separate volume in later editions. The first part contained a 'Dictionary of Raw Materials and Miscellaneous Bodies, including pigments and dyestuffs of interest to the chemist–perfumer'. In the preface Walter considered it essential that the perfumer should know as much as possible about the raw materials he was using, and stressed that he had included the more important of them with their varieties, sources and properties, and mentioned standard works of reference for more detailed chemistry or analysis. He included in some cases formulae to illustrate their use. For cyclamen he included one giving a good imitation of the flower perfume.

There are several black-and-white photographs showing the cultivation of some of the aromatic plants including one of rosemary in England at Long Melford and several of clary sage, *Salvia sclarea*, which at that time was an indispensable ingredient of 'ambers, chypre, carnation, trèfle, foin coupé and orchidée'.

Part II is on Perfumes, and in spite of his interest in synthetics is devoted to the production of natural perfumes. There are a number of photographs showing the apparatus used to extract the oils and the storage vats in the factory. The labour intensity of some of the operations, especially for Enfleurage, was considerable. For jasmine, for instance, the petals placed on the fat to absorb the essential oil were not only placed on by hand but also lifted off in the same way after absorption. The marks made by the girls' fingers when lifting the petals off spoilt the surface of the grease and made it uneven for the next layer of flower petals. The Lautier Fils company solved this problem by using a machine with a high-speed revolving brush to remove the petals which fell to the floor as rubbish. There is photograph of such a machine with girls operating it. There are many glossy photographs throughout the book.

At the beginning of Part III on cosmetics Poucher quotes an American, Lilian H. Foster of New York (*The American Perfumer*, October 1922) as follows:

> Instead of propagating wallflowers the rouge pot has nourished the roots of many a family tree, for man has oft and anon been beguiled into matrimony by a pink cheek, and he doesn't really care whether it's the result of wind and weather or of a laboratory so long as it pleases him.

> As it serves as a worthy commodity of commerce and as an adjunct to beauty, a double function combining the useful and the ornamental, should not the make-up box receive its due and be accorded recognition as a valued member of society?

The section is quite small in comparison with today's volume but shows quite clearly those products used by men and women in the early years just after the First World War. There are typical products of the period in chapters in alphabetical order, but most of the groups appearing today do not occur; for instance there are no antiperspirants. Toilet waters had appeared in 'Perfumes' in Part II – they were not in those days recognized as deodorants.

The formulae themselves are extremely interesting. For instance bath products start with bath crystals formed from sodium carbonate and then a formula using borax, and their production, tinting and perfuming are described. These are followed by bath tablets and powders and bath fluids. Bath potpourri and water softeners finish the chapter.

There was a chapter on hair preparations which included brilliantines, pomades, lotions, tonics, hair-curling applications, hair restorers, shampoos and henna. The shampoos, except for the dry shampoos, are all based on soap, and formulated using soap powder or made *in situ* from alkalis and natural oils. The following appears: 'Cocoa-nut oil Shampoos frequently known as Emulsified, are made from saponifying *odourless* [sic] Cochin Oil with potash.' But since the commercial values of potash (x) varied considerably from 78% to 83%, Poucher goes on to give a numerical formula for calculating the way to arrive at the amount (y) needed to neutralize the oil. He describes how the potash should be

> 'dissolved in a 1000 grams of water heated to 75°C and added to the oil at the same temperature. The reaction can be controlled by using phenolphthalein as an indicator – if the liquid remains *white* further additions of alkali are necessary, whereas when it turns red more oil is necessary.'
>
> The formula now reads:

Cocoa-nut Oil	1000 grams
Potassium hydroxide	y grams
Distilled water	1000 c.c.
Potassium carbonate	30 grams
Distilled water to produce	5000 c.c.

> The liquid soap is left to deposit and the clear solution decanted as required.

There were no named 'detergents' to use to make the later so-called soapless shampoos. The same can be said for emulsifiers, although the physical action of 'emulsification' is recognized when borax is added to the beeswax/mineral oil cold cream described in the skin preparations chapter.

latest developments in legislation in Europe, the USA and Japan, but also each separately outlines the steps which should be taken to comply with them.

In Europe the 6th Amendment has been added to the 1976 Cosmetic Directory, and this means considerable control of cosmetics today. Although these controls or similar ones are spreading to other countries they are not yet in force worldwide. There have been attempts by international meetings to bring this about, but it remains an ideal to be aimed at for the future when a cosmetic can be purchased and used anywhere in the world with absolute safety.

The other chapters in this Part support the obtaining of the legal requirements. In Europe under the 6th Amendment a Product Information Package (PIP) must be kept on each product and made available for inspection by the authorities, when required. Records of the test results of formulation development, batch checking during production, raw material and finished product specifications showing test results which comply with them, long-term storage stability of product and its package, and consumer safety-in-use must be included.

The chapter outlining methods of analysis gives some traditional methods but 'emphasis has been given to chromatographic and spectroscopic instrumental techniques because they represent the biggest areas of application, and the instrumentation involved has become much more accessible in terms of cost, reliability and the expertise needed to analyse samples', to quote its author.

During the development stage substantiation of the claims to be made when marketed must also be included in the PIP. There is a chapter discussing the use of human volunteer panels to assess the efficacy of products. During these trials, of course, any obvious adverse consumer reactions can be noted and the product formulation changed if necessary. Consumer panels are also used in the chapters on safety, microbiological control, stability, and in assessing consumer acceptance in perfume and the manufacture of consumer products. In the latter there is a discussion on the ethics of how the panels should be formed, and their responsibilities.

Panel trials, when all the tests which have been carried out in-house and by consumers at home seem to ensure that the product is safe and stable, long-term, also give an indication of whether this is still so with repeated consumer use in a different environment. Consumer comments are useful in many ways; one is on the assessment of the type of packing, e.g. is it easy to replace the lid of a jar or cap of a tube after use?

Thus if the information and guidelines are followed in this part of the book, so that the results of the investigation at the development stage of a new product are satisfactory and it is possible to repeat the results of the tests when in production and marketed, then the recording of the results which appear in the PIP should show that from its initial planned development through its manufacture and sale the product will be stable in long-term storage and safe in consumer use until the end of the material in the bottle, tube, jar, sachet or aerosol – in fact any pack used by the industry.

So from his first pioneering work in 1923, which separated cosmetics and toiletries from pharmacy, and his production of updated editions, W.A. Poucher contributed greatly to the development of cosmetic science, which includes perfumery and soap.

As a result of his career in perfumery and cosmetics, in 1952 he became the first Honorary Member of the Society of Cosmetic Chemists of Great Britain (now the Society of Cosmetic Scientists) and in 1954 the US Society of Cosmetic Chemists awarded him their Medal for 'his outstanding contribution to the art and science of Cosmetics' (the first perfumer and the first person outside the USA to receive the honour). In 1956 he was elected Honorary Member of the USA Society of Perfumers in recognition of his distinctive service to the perfumery and cosmetic industries.

W.A. POUCHER'S OTHER CAREERS

Poucher once said that his 'life was a search for beauty in music, cosmetics and mountains', and he achieved much in pursuing this search.

As a child he wanted to be a concert pianist. He had a passion for Chopin's music and practised until all hours, so that 'his father had to turn out the gaslight in order to get him to bed'. In spite of not following this ambition he continued to play for pleasure until he sold his Steinway in 1958.

In his love of perfumes and the formulation of cosmetics he aimed to inspire men and women to beautify themselves, and this formed his main business career, but when he retired from Yardley at 65 years of age they presented him with a Leica camera. He then had plenty of time to increase and perfect his photographic records of the mountainous scenery he so loved and to develop his second career.

His love of photography began when he had a darkroom in a cupboard at the top of the cellar steps in his youth in his home in Lincolnshire, and through the years he had taken black-and-white photographs of the mountains and hills in the Lake District, Snowdonia, the Highlands of Scotland, the Pennines, Surrey, the West Country and Ireland, with in addition photographs taken during visits to the Alps, the Dolomites, and on the Riviera. The first publication was *Lakeland through the Lens* in 1940, which was followed by a further 20 books (13 published by Chapman & Hall and eight by Country Life), with many photographs in black and white covering the areas he loved best in the British Isles and the Dolomites.

He was elected first an Associate and then a Fellow of the Royal Photographic Society in 1942 and later Honorary Fellow in 1975, and donated to them his library of black-and-white prints in 1985. He changed to colour, and in 1980 Constable published his *Scotland*, and to date a further 15 titles have been published in coffee-table format, the last in 1997 some nine years after his death. This was made possible because Constable had approached his son to see

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W.A. Poucher's influence on the early cosmetic industry

Hilda Butler

INTRODUCTION

> *A Cosmetic: Any substance or preparation intended to be placed in contact with the various parts of the human body (epidermis, hair system, nails, lips, and external genital organs) or with the teeth and the mucous membranes of the oral cavity with a view to exclusively or mainly to cleaning them, perfuming them, or changing their appearances and/or correcting body odours and/or protecting them or keeping them in good condition.*
> (Definition of a Cosmetic, 6th Amendment (1993), Article 7a, *EU Cosmetic Directory*)

The legal regulations cover all the products named in this book whether classed as toiletries or cosmetics.

The reason for a new edition of Poucher's volume on cosmetics is that during the years that have intervened since the last one there have been important developments, not only in the cosmetic industry but in cosmetic science, which cover the research in maintaining standards of quality in the development and regulation of the marketing of safe, stable products which the consumer can use with confidence.

Young chemists using this new volume and benefiting from the information on cosmetic science and facts about the industrial side of marketing cosmetics must wonder who the writer was whose opus is being revised and enlarged for the tenth time.

Well, he was a man of great character with many interests which he followed with great energy. He was born in Horncastle in 1891 and named William Arthur Poucher, but was known to family and friends as Walter (he preferred it that way). He went to the local primary and grammar schools here. He was

Butler, H. (ed.), Poucher's Perfumes, Cosmetics and Soaps, 10th Edn., 3–11

apprenticed to a pharmacy, Carltons, then attended the College of the Pharmaceutical Society in Bath where he obtained his PhC (Minor in 1912 and Major in 1913), winning the Bronze Medal in 1914. He studied for a time at Charing Cross Hospital with a view to a career in medicine, but was persuaded to join the Royal Army Medical Corps. He was commissioned in 1915 and promoted to Captain in 1918. He served in France mainly with the 41st Casualty Clearing Station and was demobbed in 1919 as Captain and Quartermaster.

After the war as a Vice-president of the League of Ex-service Pharmacists, and at the request of the Council he visited branches round the country to arouse public opinion regarding the state of the Army Pharmaceutical Service. He joined the United Chemists Association Ltd and became their Works Manager and Chief Chemist. On leaving UCAL he worked as an independent consultant to the Perfumery and Cosmetic Industry. He bought the soapmakers, R.F. Wright, which he later sold, and became Chief Perfumer of Yardley. He remained with them for 30 years until his retirement at 65. In his later years with this company his unique contract with Yardley allowed him to work for them for six months leaving him to follow his other pursuits for the rest of the year. His major creation for them was his perfume 'Bond Street'.

1923: FIRST EDITION: PERFUMES AND COSMETICS

In the 1920s he believed that 'it was unfair that perfumes were only available to Royalty, actresses and prostitutes' and as a consultant he was able to introduce inexpensive perfumes that could be obtained by office girls and shop girls. He also created new developments for perfuming cosmetic products.

Cosmetic chemistry was closely allied in those days to pharmacy, and specialist books on cosmetics were not printed. His experience and aims enabled him to write and have published in 1923 the first edition of this book entitled *Perfumes and Cosmetics, with especial reference to Synthetics*; this was contained in one volume. It was only in later editions that *Soap* was added to the title, and later editions expanded to form three volumes. The reference to synthetic aromatic materials is interesting because in the intervening three-quarters of a century they have become exceedingly numerous with many more suppliers marketing them. The cost of collecting and processing the natural extracts of oils from natural flower leaf and root oils rose considerably as higher wages were demanded and obtained under trade union influence, through the decades.

In the 19th century perfumery was considered to be an art, totally; but in the preface to the work Poucher opens with the observation that 'The study of perfumes has a fascination unsurpassed by any other branch of chemistry. The researches of many distinguished scientists have gradually raised it from one of the minor arts to almost the level of a science.'

The analysis, isolation and identification of the component parts of the natural oils evolved and pure synthetic materials were made – some absolutely identical

There was a chapter on lip salves and rouge sticks, and a separate one for theatrical make-up. It was some years before make-up was to be used by most women – developed commercially from the theatrical products and really popularized by the movie stars; but manicure preparations were included. The most amazing inclusion is a whole chapter on smelling salts! Face powders of different colours were included in toilet powders. Interestingly compact powders were already *in vogue* and information is given on manufacture by hand and/or machinery, and nursery powders are also included.

The book was a great success in its day and in 1925 the second edition was printed with a large expansion of Part I. To keep pace with the increasing size of the industry and use of cosmetics and perfumes generally by the public, subsequent editions appeared in 1928, 1930, 1936, 1942, reprinted in 1950, 1959, 1974, and again reprinted in 1976, 1979, and 1984 with an updated revised edition for Volumes 1 and 3, the 9th in 1993, and now the 10th. Poucher wrote them all until 1974 when he still wrote Volume 2 on perfumes, but Volumes 1 and 3 were revised by G.M. Howard.

I came to industry straight from college, having a chemistry degree with physics as subsidiary, and I used the 5th edition when a separate volume was first issued for cosmetics. I was totally ignorant of the knowledge needed for the specialized subject and found the volumes a fountain of information for formulation of the various products I was asked to develop. During the Second World War, when raw materials were in short supply or often non-existent, replacement formulations had to be manufactured on the spot. Poucher was invaluable. After the war when I changed jobs I had to leave the books behind, but I made sure that I replaced them – this time it was the 6th edition published in 1942 and reprinted in 1950.

In the preface Poucher again mentions the huge increase in new substances used by manufacturers, and enumerates the new finished products which have had to be added, i.e. bath oils, brilliantine creams (Beecham's hair cream for men was selling all over the world), hair lacquers, greaseless hair creams (gums were used: gum tragacanth, sodium alginate), a new type of hair dye, lipstick colours, mascara, eye lotions, skin food, deodorant sticks, complexion milk and powder sticks.

Poucher also says:

> I cannot impress on chemists too strongly the importance of *simplicity of formulation* in their experiments. Almost always a few well-chosen raw materials properly combined will give a more elegant and stable product than a long formula in which one ingredient may upset another and so spoil the balance of the finished product – the unsatisfactory result not always being apparent until after packing and despatch for sale.

Times have changed, and this last hazard is not likely to take place, as the following outline should demonstrate.

TENTH EDITION: POUCHER'S PERFUMES, COSMETICS AND SOAPS

Now 58 years after Poucher wrote that preface industrial suppliers are offering increased numbers of new raw materials. Many form specialist groups, which with slight changes in molecular structure inspire improved formulations of existing products or new types not previously marketed. The manufacturers are guaranteeing good quality, that the materials have been thoroughly tested toxicologically, accepted for use in cosmetics, and they supply specifications for each batch showing the results of physical and chemical analysis including their microbiological status. They offer considerable help in establishing the grounds for the use of their products and usually supply evidence of the claims that can be made for their beneficial use.

The new volume is in four parts. After a historical start the chapters in Part 2, which deal with different products in alphabetical order, include examples of these new materials, their properties and uses. There are materials for which claims can be made for the finished product's feel on the skin, e.g. groups of substances such as the silicone polymer derivatives, which may also increase stability.

On offer today are new antiperspirant compounds, new emulsifiers, new colours, new surfactants, new sunscreens and many others and, because the public believe that 'natural ingredients' are safer to use than 'chemicals', many new extracts of plants and those used in past centuries are being offered for use.

Of course it is not true that, because these preparations were used for many years by many people, they are or will be safe for repeated use, or remain stable in the new type of basic products marketed today. Mass production, and storage in warehouses and in shops before sale, are serious challenges for stability compared with concoctions which were prepared in the family kitchens in days gone by and not kept very long before being used up. Today's challenges are described, and solutions discussed, in Part 3.

Also in Part 2 the physiological and biological functions of the skin, hair, teeth and nails, which were touched on in earlier editions and covered more fully in the 9th edition, are still included, but that and any other information which is repeated is needed for those who are not familiar with that work. This also acts as an easy reference and reminder. Apart from the new raw materials there are new forms of products and new methods of manufacturing them.

The industry has always realized that the authorities have in the past considered cosmetics unnecessary and trivial compared with the need for pure food and safe medicines, so to keep pace with the changing times the industry instituted its own voluntary guidelines for the manufacture and sale of cosmetics, to ensure the maintenance of good quality and excellent history of safety-in-use which they have always enjoyed.

However, as there have been areas in other fields where serious mistakes have been made in consumer goods, it has been thought necessary to introduce Legal Regulations to safeguard consumer confidence. A chapter in Part 3 covers the

SKR GOVT.DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE- 2022-23

SUBJECT : HOUSE HOLD CHEMICALS

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.

a) sodium carbonate
b) sodium rosinate
c) sodium silicate
d) borax

2. What is the use of tri sodium phosphate in soap powder?

a) to make the soap act rapidly
b) to make it lather
c) to prevent rapid drying
d) for good odour

3. Identify the cationic detergent from the following

a) cetyltrimethyl ammonium bromide
b) Sonam dodecyl sulphate
c) Penta erythritol monosterate
d) sodium lauryl sulphate

4. Which of these are household poisons?

a) toilet bowl cleaner
b) alcoholic drinks
c) cigarettes
d) all the above

5. The best way to handle a household cleaner is to

a) read the label
b) use rubber gloves
c) keep a window open
d) none of the above

6. What's an indication that you should stop using a chemical?

a) You feel dizzy
b) you feel nauseated
c) You develop a headache
d) any of the above

7. Which of the following compound cannot remove grease from the clothes.

A) Gasoline
B) potassium palmitate
C) Soap
D) potassium pentanoate

8 which of the following is an ordinary soap?

A) **Sodium stearate**
B) calcium stearate
C) Sodium acetate
D) sodium benzoate

9) Soap is a?

A) **Sodium stearate**
B) calcium stearate
C) Sodium acetate
D) sodium benzoate

10) Detergent is____

A) Sodium stearate
B) **sodium alkyl sulphonate**
C) Potassium butyrate
D) Sodium oleate.

11) Bath soap is a mixture of

A) **potassium salts of higher fatty acids** B) Sodium and Calcium salt of higher fatty acids
C) potassium permit 8 and sodium stearate D) sodium Salsa higher fatty acids

12) In human being and animals the oil and the facts are hydrolysed by which enzymes enzymes
A) diastase B) zymase
C) Lipase D) None

13) The chemical name of washing soda
A) Mineral acid **B) Fatty acid**
C) Lactic acid7 D) Carbonic acid

14) The process of manufacturing of soap is called
A) Ion exchange B) Allocation
C) Saponification D) Steam distillation

15) Dishwashing liquids are examples of _____
A) Soaps B) anionic detergents
C) cationic detergents **D) non-ionic detergents**

16) What is the use of tri sodium phosphate in soap powders?
A) To make the soap act rapidly B) To make it lather
C) To prevent rapid drying D) For good odour

17) Synthetic detergents are better than soaps
a) Synthetic detergent work both in soft water and hard water
b) Soaps works both in soft water and hard water
c) Synthetic detergents works only in hard water
d) Soaps works only in hard water

18) Which of the following is an example of non-ionic detergent
a) Ammonium chloride b) Sodium salts of alkyl sulphates
c) Sodium salts of alkyl benzene sulphonic acids **d) Polyether**

19) The % weight of detergent in washing powder is
a) 5-10 b) 50-70 **c) 15-0** d) 30-45

20) If the carbon chain is linear the corresponding detergent will be
a) Soft and non-biodegradable b) Soft and biodegradable
c) Hard and biodegradable **d) Hard and non-biodegradable**

TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

22. Labels of all home and garden products must be precise, showing exactly what substances are present and the amount of each. **T/False**

23. Household products must be tested for their long-term health effects before being Placed on the market. **T/False**

24. Products placed on the market are not guaranteed to be safe. **True/F**

25. "Active" ingredients make up the major portion of a product. **T/False**

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENTOF CHEMISTRY

R. Lakshmi Soujanya
II BSc (CBZ)

VALUE ADDED COURSE, (2022-23)

HOUSE HOLD CHEMISTRY

Name- Class- Marks obtained- 42

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.

a) sodium carbonate
b) sodium rosinate
c) sodium silicate
d) borax

2. What is the use of tri sodium phosphate in soap powder?

a) to make the soap act rapidly
b) to make it lather
c) to prevent rapid drying
d) for good odour

3. Identify the cationic detergent from the following

a) cetyltrimethyl ammonium bromide
b) Sonam dodecyl sulphate
c) Penta erythritol monosterate
d) sodium lauryl sulphate

4. Which of these are household poisons?

a) toilet bowl cleaner
b) alcoholic drinks
c) cigarettes
d) all the above

5. The best way to handle a household cleaner is to

a) read the label
b) use rubber gloves
c) keep a window open
d) none of the above

6. What's an indication that you should stop using a chemical?

a) You feel dizzy
b) you feel nauseated
c) You develop a headache
d) any of the above

7. Which of the following compound cannot remove grease from the clothes.

A) Gasoline
B) potassium palmitate
C) Soap
D) potassium pentanoate

8 which of the following is an ordinary soap?

A) Sodium stearate
B) calcium stearate
C) Sodium acetate
D) sodium benzoate

9) Soap is a?

A) Sodium stearate
B) calcium stearate
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D) sodium benzoate

10) Detergent is____

A) Sodium stearate
B) sodium alkyl sulphonate
C) Potassium butyrate
D) Sodium oleate.

11) Bath soap is a mixture of

A) potassium salts of higher fatty acids
B) Sodium and Calcium salt of higher fatty acids
C) potassium permit 8 and sodium stearate
D) sodium Salsa higher fatty acids

12) In human being and animals the oil and the facts are hydrolysed by which enzymes enzymes

A) diastase
B) zymase
C) Lipase
D) None

13) The chemical name of washing soda

A) Mineral acid
B) Fatty acid
C) Lactic acid7
D) Carbonic acid

14) The process of manufacturing of soap is called

A) Ion exchange
B) Allocation
C) Saponification
D) Steam distillation

15) Dishwashing liquids are examples of _____

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d) Hard and non-biodegradable

TRUE / FALSE

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25. "Active" ingredients make up the major portion of a product. **T/False**

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- B. Mahalakshmi Class- 3rd bsc (MPC) Marks obtained- 38

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.

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b) sodium rosinate
c) sodium silicate
d) borax

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b) Soft and biodegradable
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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- G. Baby Class- II BSc HPC Marks obtained- 36

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.
a) sodium carbonate
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c) sodium silicate
d) borax

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b) to make it lather
c) to prevent rapid drying
d) for good odour

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d) sodium lauryl sulphate

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C) Potassium butyrate
D) Sodium oleate.

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C) potassium permit & and sodium stearate
D) sodium Salsa higher fatty acids

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A) diastase
C) Lipase
B) zymase
D) None

13) The chemical name of washing soda

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C) Lactic acid7
B) Fatty acid
D) Carbonic acid

14) The process of manufacturing of soap is called

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C) Saponification
B) Allocation
D) Steam distillation

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B) anionic detergents
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d) 30-45

20) If the carbon chain is linear the corresponding detergent will be

a) Soft and non-biodegradable
c) Hard and biodegradable
b) Soft and biodegradable
d) Hard and non-biodegradable

TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

22. Labels of all home and garden products must be precise, showing exactly what substances are present and the amount of each. **T/False**

23. Household products must be tested for their long-term health effects before being Placed on the market. **T/False**

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25. "Active" ingredients make up the major portion of a product. **T/False**

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- G.U.B. Naga Sridevi Class- II BSc (MPC) Marks obtained- 36

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.

a) sodium carbonate
c) sodium silicate
b) sodium rosinate
d) borax

2. What is the use of tri sodium phosphate in soap powder?

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10) Detergent is____

A) Sodium stearate
C) Potassium butyrate
B) sodium alkyl sulphonate
D) Sodium oleate

11) Bath soap is a mixture of

A) potassium salts of higher fatty acids
C) potassium permit 8 and sodium stearate
B) Sodium and Calcium salt of higher fatty acids
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12) In human being and animals the oil and the facts are hydrolysed by which enzymes enzymes

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B) zymase
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D) None

13) The chemical name of washing soda

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d) 30-45

20) If the carbon chain is linear the corresponding detergent will be

a) Soft and non-biodegradable
b) Soft and biodegradable
c) Hard and biodegradable
d) Hard and non-biodegradable

TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

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25. "Active" ingredients make up the major portion of a product. **T/False**

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- K. Ramalakshmi Class- II B.Sc MPC Marks obtained- 46

QUESTION PAPER

MARKS : 50

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c) sodium silicate
d) borax

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D) Sodium oleate.

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- M. Ramulamma Class- II B.Sc (M.P.C) Marks obtained- 38

QUESTION PAPER

MARKS : 50

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P. Soni
II B.Sc (MPC)

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)

SUBJECT : HOUSE HOLD CHEMISTRY

QUESTION PAPER

MARKS : 50

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A) Ion-exchange
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C) Saponification
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15) Dishwashing liquids are examples of _____

A) Soaps
B) anionic detergents
C) cationic detergents
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16) What is the use of tri sodium phosphate in soap powders?

A) To make the soap act rapidly
B) To make it lather
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a) Synthetic detergent work both in soft water and hard water
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18) Which of the following is an example of non-ionic detergent

a) Ammonium chloride
b) Sodium salts of alkyl sulphates
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19) The % weight of detergent in washing powder is

a) 5-10
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20) If the carbon chain is linear the corresponding detergent will be

a) Soft and non-biodegradable
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TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- K. Vaishnavi Class- II BSc CBt Marks obtained- 40

QUESTION PAPER

MARKS : 50

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a) toilet bowl cleaner
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a) read the label
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7. Which of the following compound cannot remove grease from the clothes.

A) Gasoline
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A) potassium salts of higher fatty acids
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A) diastase
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SUBJECT : HOUSE HOLD CHEMISTRY

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K. Bhanu prasanna

II CBZ B.Sc

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K. Mrudhula Devi

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K. kame swari
II C.B.Z
II B.Sc C.BZ

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K. naga Lakshmi
II B-SC CBZ

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M. Sravani
II B.Sc CBZ
34

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M.d. Soha alia
II B.Sc [C.B.Z]

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A) Ion exchange
B) Allocation
C) Saponification
D) Steam distillation

15) Dishwashing liquids are examples of _____

A) Soaps
B) anionic detergents
C) cationic detergents
D) non-ionic detergents

16) What is the use of tri sodium phosphate in soap powders?

A) To make the soap act rapidly
B) To make it lather
C) To prevent rapid drying
D) For good odour

17) Synthetic detergents are better than soaps

a) Synthetic detergent work both in soft water and hard water
b) Soaps works both in soft water and hard water
c) Synthetic detergents works only in hard water
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18) Which of the following is an example of non-ionic detergent

a) Ammonium chloride
b) Sodium salts of alkyl sulphates
c) Sodium salts of alkyl benzene sulphonic acids
d) Polyether

19) The % weight of detergent in washing powder is

a) 5-10
b) 50-70
c) 15-0
d) 30-45

20) If the carbon chain is linear the corresponding detergent will be

a) Soft and non-biodegradable
b) Soft and biodegradable
c) Hard and biodegradable
d) Hard and non-biodegradable

TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

22. Labels of all home and garden products must be precise, showing exactly what substances are present and the amount of each. **T/False**

23. Household products must be tested for their long-term health effects before being Placed on the market. **T/False**

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25. "Active" ingredients make up the major portion of a product. **T/False**

34

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

P. hema latha
III. BSc CB

Name-

Class-

Marks obtained-

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.
a) sodium carbonate
b) sodium rosinate
c) sodium silicate
d) borax

2. What is the use of tri sodium phosphate in soap powder?
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d) for good odour

3. Identify the cationic detergent from the following
a) cetyltrimethyl ammonium bromide
b) Sonam dodecyl sulphate
c) Penta erythritol monosterate
d) sodium lauryl sulphate

4. Which of these are household poisons?
a) toilet bowl cleaner
b) alcoholic drinks
c) cigarettes
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5. The best way to handle a household cleaner is to
a) read the label
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d) none of the above

6. What's an Indication that you should stop using a chemical?
a) You feel dizzy
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7. Which of the following compound cannot remove grease from the clothes.
A) Gasoline
B) potassium palmitate
C) Soap
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8 which of the following is an ordinary soap?
A) Sodium stearate
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C) Sodium acetate
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9) Soap is a?
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10) Detergent is____
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D) Sodium oleate.

11) Bath soap is a mixture of
A) potassium salts of higher fatty acids
B) Sodium and Calcium salt of higher fatty acids
C) potassium permit & and sodium stearate
D) sodium Salsa higher fatty acids

12) In human being and animals the oil and the facts are hydrolysed by which enzymes enzymes

A) diastase
B) zymase
C) Lipase
D) None

13) The chemical name of washing soda

A) Mineral acid
B) Fatty acid
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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

P. Gr. Rupa Sri
Ind. BSc CBZ

Name- Class- Marks obtained- 46

QUESTION PAPER

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENTOF CHEMISTRY

VALUE ADDED COURSE, (2022-23)

P. Revati
IInd BSc CBZ

SUBJECT : HOUSE HOLD CHEMISTRY

QUESTION PAPER

MARKS : 50

38

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)
HOUSE HOLD CHEMISTRY

Name- R. Nandhini   Class- II BSC CBZ(EM)   Marks obtained- 42

QUESTION PAPER   MARKS : 50

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENTOF CHEMISTRY

VALUE ADDED COURSE, (2022-23)

SUBJECT : HOUSE HOLD CHEMISTRY

QUESTION PAPER

Rajkavya Sridevi

II B.Sc CBZ

MARKS : 50

30

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S. Sowmya
II B.Sc. CBZ

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)

SUBJECT : HOUSE HOLD CHEMISTRY

QUESTION PAPER

MARKS : 50 (32)

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SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM
DEPARTMENTOF CHEMISTRY
VALUE ADDED COURSE, (2022-23)

J. Deepika
II BSc (CB2)

SUBJECT : HOUSE HOLD CHEMISTRY

QUESTION PAPER

MARKS : 50

36

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D) Carbonic acid

14) The process of manufacturing of soap is called

A) Ion exchange
B) Allocation
C) Saponification
D) Steam distillation

15) Dishwashing liquids are examples of _____

A) Soaps
B) anionic detergents
C) cationic detergents
D) non-ionic detergents

16) What is the use of tri sodium phosphate in soap powders?

A) To make the soap act rapidly
B) To make it lather
C) To prevent rapid drying
D) For good odour

17) Synthetic detergents are better than soaps

a) Synthetic detergent work both in soft water and hard water
b) Soaps works both in soft water and hard water
c) Synthetic detergents works only in hard water
d) Soaps works only in hard water

18) Which of the following is an example of non-ionic detergent

a) Ammonium chloride
b) Sodium salts of alkyl sulphates
c) Sodium salts of alkyl benzene sulphonic acids
d) Polyether

19) The % weight of detergent in washing powder is

a) 5-10
b) 50-70
c) 15-0
d) 30-45

20) If the carbon chain is linear the corresponding detergent will be

a) Soft and non-biodegradable
b) Soft and biodegradable
c) Hard and biodegradable
d) Hard and non-biodegradable

TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

22. Labels of all home and garden products must be precise, showing exactly what substances are present and the amount of each. **T/False**

23. Household products must be tested for their long-term health effects before being Placed on the market. **T/False**

24. Products placed on the market are not guaranteed to be safe. **True/F**

25. "Active" ingredients make up the major portion of a product. **T/False**

SKR GOVERNMENT DEGREE COLLEGE (W), RAJAMAHENDRAVARAM

DEPARTMENTOF CHEMISTRY

VALUE ADDED COURSE, (2022-23)

HOUSE HOLD CHEMISTRY

38

Y. P. Sai Amrutha

II BSc CBZ

Name- Class- Marks obtained-

QUESTION PAPER

MARKS : 50

1. Which of the following causes soap to lather.

a) sodium carbonate **b) sodium rosinate**

c) sodium silicate d) borax

2. What is the use of tri sodium phosphate in soap powder?

a) to make the soap act rapidly b) to make it lather

c) to prevent rapid drying d) for good odour

3. Identify the cationic detergent from the following

a) cetyltrimethyl ammonium bromide b) Sonam dodecyl sulphate

c) Penta erythritol monosterate d) sodium lauryl sulphate

4. Which of these are household poisons?

a) toilet bowl cleaner b) alcoholic drinks

c) cigarettes **d) all the above**

5. The best way to handle a household cleaner is to

a) read the label b) use rubber gloves

c) keep a window open d) none of the above

6. What's an indication that you should stop using a chemical?

a) You feel dizzy b) you feel nauseated

c) You develop a headache d) any of the above

7. Which of the following compound cannot remove grease from the clothes.

A) Gasoline B) potassium palmitate

C) Soap **D) potassium pentanoate**

8 which of the following is an ordinary soap?

A) **Sodium stearate** B) calcium stearate

C) Sodium acetate D) sodium benzoate

9) Soap is a?

A) Sodium stearate B) calcium stearate

C) Sodium acetate D) sodium benzoate

10) Detergent is____

A) Sodium stearate **B) sodium alkyl sulphonate**

C) Potassium butyrate D) Sodium oleate.

11) Bath soap is a mixture of

A) potassium salts of higher fatty acids B) Sodium and Calcium salt of higher fatty acids

C) potassium permit 8 and sodium stearate D) sodium Salsa higher fatty acids

12) In human being and animals the oil and the facts are hydrolysed by which enzymes enzymes

A) diastase B) zymase

C) Lipase D) None

13) The chemical name of washing soda

A) Mineral acid **B) Fatty acid**

C) Lactic acid7 D) Carbonic acid

14) The process of manufacturing of soap is called

A) Ion exchange B) Allocation

C) Saponification D) Steam distillation

15) Dishwashing liquids are examples of _____

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C) cationic detergents **D) non-ionic detergents**

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a) 5-10 b) 50-70 **c) 15-0** d) 30-45

20) If the carbon chain is linear the corresponding detergent will be

a) Soft and non-biodegradable b) Soft and biodegradable

c) Hard and biodegradable **d) Hard and non-biodegradable**

TRUE / FALSE

21. Manufactures of household cleaners are required to list all ingredients of their products. **T/False**

22. Labels of all home and garden products must be precise, showing exactly what substances are present and the amount of each. **T/False**

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24. Products placed on the market are not guaranteed to be safe. **True/F**

25. "Active" ingredients make up the major portion of a product. **T/False**

S.K.R.GOVERNMENT DEGREE COLLEGE (WOMEN):: RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE

MARKS AWARDED - HOUSE HOLD CHEMICALS/VALUE ADDED COURSE

Date: 01/03/2023 **Time:1hour**

Class: II BSc MPC **MaxMarks:50**

Students List

S.No	Regd.No	Name of the Students	Marks	Marks in Words
1	210907101002	Bade Mahalakshmi	38	Thirty Eight
2	210907101003	Bandaru N S K Mahalakshmi	Not	attended
3	210907101007	Ganneti Baby	36	Thirty six
4	210907101008	Gavara Uma B Naga Sridevi	36	Thirty Six
5	210907101013	Kakuri Rama Lakshmi	46	Forty Six
6	210907101018	Madakam Ramulamma	38	Thirty Eight
7	210907101019	Pamparaboyina Siri	42	Forty Two
8	210907110112	Karam Vishnavi	40	Forty only
9	210907110113	Karri Bhanu Prasanna	36	Thirty six
10	210907110116	Kondapalli Mrudula Devi	36	Thirty six
11	210907110118	Kotla Kameswari	44	Forty Four
12	210907110120	Kote Naga Lakshmi	36	Thirty Six
13	210907110121	Kulla Sridevi	Not	attended
14	210907110128	Madam Sravani	34	Thirty Four
15	210907110131	Mohhammed Soha Alia	50	Fifty only
16	210907110133	Muchi Ranjitha	Not	attended
17	210907110134	Mulavada Charmila	Not	attended
18	210907110139	Pallala Hema Latha Reddy	34	Thirty Four
19	210907110140	Poluju Priyanka	Not	attended
20	210907110141	Potula Gnana Roopa Sri	46	Forty Six
21	210907110142	Pyla Revathi	38	Thirty Eight
22	210907110143	R Nandini	42	Forty Two
23	210907110144	Relangi Navya Sridevi	30	Thirty only
24	210907110152	Sode Ishwarya	32	Thirty Two
25	210907110153	S Nagajyothi	Not	attended
26	210907110154	S Neeraja	Not	attended
27	210907110159	Tupuri Shanthi	Not	attended
28	210907110160	Uppu Deepika Sravanthi	36	Thirty six
29	210907110165	Yandamuri P Sai Amrutha	38	Thirty Eight
30	210907110122	Rdupalli L. Soujanya	42	Forty Two

Dr. Ch.V.V. Srinivas
Lecturer in Chemistry
S.K.R. Government Degree College (W)
RAJAMAHENDRAVARAM.

Dr. M. Sunitha
Lecturer in Chemistry
S.K.R. Government Degree College (W)
RAJAMAHENDRAVARAM.

PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM.
East Godavari Dist., Andhra Pradesh

S.K.R.GOVERNMENT DEGREE COLLEGE (WOMEN),
RAJAMAHENDRAVARAM,
RE-ACCREDITED AT B+ LEVEL BY NAAC

Certificate

This is to certify that _____ of II B.Sc succesfully completed the Value Added Course on House Hold Chemicals conducted by the Department of Chemistry from 02-01-2023 to 01-03-2023.

.

_____ Head of the Department

_____ Principal


CHEMISTRY LAB-I

2022-23

Value Added course on House Hold Chemicals from 02/01/23 to 01/03/23 for II B.Sc students

S.No	Name	Roll No	2/1/23	4/1	5/1	6/1	7/1	9/1	19/1	20/1	21/1	23/1	24/1	25/1	27/1	28/1	31/1	1/2/23	2/2	3/2	4/2	6/2	7/2	8/2	9/2	10/2	13/2	14/2	15/2	16/2	17/2	20/2	21/2	22/2	24/2	25/2	28/2	1/3/23	1/3/23
1	B. Mahalakshmi	2109071101002	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	38
2	B.N.S.K. Mahalakshmi	1003	/	a	a	/	/	/	a	a	a	a	a	a	a	a	a	a	/	a	/	a	a	a	a	a	a	a	a	/	/	/	a	a	a	a	a	a	Δ
3	G. Baby	1007	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	36
4	G.U.B.N. Sridevi	1008	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	36
5	K. Ramalakshmi	1013	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	46
6	M. Ramulamma	1018	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	38
7	P. Siri	1019	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	48
8	K. Vaishnavi	210907110112	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	40
9	K. Bhanu Prasanna	113	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	a	/	/	/	/	/	/	/	/	/	/	/	36
10	K. Mrudula Devi	116	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	36
11	K. Kameswari	118	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	44
12	K. Nagalakshmi	120	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	36
13	K. Sridevi	121	/	/	a	a	a	a	a	/	a	a	/	a	a	/	a	a	a	a	/	a	a	a	/	a	/	a	a	a	/	a	/	a	a	a	a	a	Δ
14	M. Sravani	128	/	/	/	/	/	/	/	/	/	/	a	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	34
15	Md. Shahlia	131	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	50
16	M. Ranjitha	133	/	/	/	a	a	a	a	/	/	a	a	/	a	a	/	/	/	a	a	a	/	/	a	a	/	/	/	a	a	a	a	a	a	a	a	a	Δ
17	M. Charmila	134	/	a	a	a	a	a	a	a	a	a	a	/	/	a	a	a	a	a	a	a	a	a	/	a	a	a	a	a	a	a	a	a	a	a	a	a	Δ
18	P.H. Latha Reddy	139	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	34
19	P. Priyanka	140	/	/	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	Δ
20	P.G. Roopasri	141	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	46
21	P. Revathi	142	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	38
22	R. Nandini	143	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	42
23	R. Navya Sridevi	144	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	30
24	S. Ishwarya	152	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	38
25	S. Nagajyothi	153	/	/	/	/	/	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	Δ
26	G. Neeraja	154	/	/	/	a	a	a	a	a	a	a	a	a	a	/	a	a	a	a	a	a	/	a	a	a	a	a	a	a	a	a	/	a	a	a	a	a	Δ
27	T. Shanthi	159	/	/	a	a	a	a	a	a	a	a	a	/	/	/	a	a	a	a	a	a	a	a	a	/	a	a	a	a	a	a	a	a	/	a	a	a	Δ
28	U.D. Sravanthi	162	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	36
29	N.P. Sai Amrutha	165	/	/	/	/	a	/	a	/	/	/	/	/	/	/	/	a	/	/	/	/	/	a	/	/	/	/	/	a	/	/	/	/	/	/	/	/	38
30	R.L. Soujanya	2109071101022	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	42

1) [signature]

2) N. [signature]

Dr. M. Sunitha
Lecturer in Chemistry
S.K.R. Government Degree College (W)

[signature]

PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM
East Godavari Dist. Andhra Pradesh

Remedial Shedule 2022 – 2023 (odd Sem)

S.No	Name of the Student	Class	Date & topic Student Signature	Date & topic Student Sign	Date & topic Student Sign	Date & topic Student Sign	Date & topic Student Sign
		III B.Sc Sem-V	1) Explain precipitation (2) post precipitation	1) accuracy, precision (2) R_f value	(1) Error classification (2) paper chromatography	(1) Distribution law (2) TLC (completed)	(1) From Freehand natural & last (2) HPLC
0.	N.B.T. Syndar						
1.	M. Jyothi priya		1) M. Jyothi Priya	1) M. Jyothi priya	1) M. Jyothi Priya	1) M. Jyothi Priya	1) M. Jyothi Priya
2.	P. Ungeswari Rani		2) P. Ungeswari Rani	2) P. Ungeswari Rani	2) P. Ungeswari Rani	2) P. Ungeswari Rani	2) P. Ungeswari
3.	G. Bindu priya		3) G. Bindu priya	3) G. Bindu priya	3) G. Bindu priya	3) G. Bindu Priya	3) G. Bindu Priya
4.	D. Siva Lakshmi		4) D. Siva lakshmi	4) D. Siva lakshmi	4) D. Siva lakshmi	4) D. Siva lakshmi	4) D. Siva lakshmi
5.	Ch. Sri Lakshmi		5) Ch. Sri Lakshmi	5) Ch. Sri Lakshmi	5) Ch. Sri Lakshmi	5) Ch. Sri Lakshmi	5) Ch. Sri Lakshmi
6.	D. Sudly		6) D. Sudly	6) D. Sudly	6) D. Sudly	6) D. Sudly	6) D. Sudly
7.	D. Sowmyakeerthi		7) Sowmya keerthi D	7) Sowmya keerthi D	7) Sowmya keerthi D	7) Sowmya keerthi D	7) Sowmya keerthi
8.	V. Harika		8) V. Harika	8) V. Harika	8) V. Harika	8) V. Harika	8) V. Harika
9.	K. Veni Sudeed		9) K. Veni Sudeed	9) K. Veni Sudeed	9) K. Veni Sudeed	9) K. Veni Sudeed	9) K. Veni Sudeed
10.	G. Girija		10) G. Girija	10) G. Girija	10) G. Girija	10) G. Girija	10) G. Girija
		II B.Sc Sem-III	(1) Explain SN1 & SN2 Rxn (2) Pinacol-pinacolone	(1) Cannizzaro (2) Aldol condensation	(1) Claisen (2) Hvz Rxn	(1) Claisen condensation (2) fundamentals vibrations	(1) Chromophore (2) auxochrome
1.	K. Naga Chandrika		1) K. Naga chandrika	1) K. Naga Chandrika	1) K. Naga Chandrika	1) K. Naga chandrika	1) Naga chandrika
2.	K. Sai prasanna Kumari		2) P. Swathi	2) P. Swathi	2) P. Swathi	2) P. Swathi	2) P. Swathi
3.	P. Mounika		3) P. Mounika	3) P. Mounika	3) P. Mounika	3) P. Mounika	3) P. Mounika
4.	P. Swathi		4) K. Sai prasanna Kumari	4) K. Sai prasanna Kumari	4) K. Sai prasanna Kumari	4) K. Sai prasanna Kumari	4) K. Sai prasanna Kumari
5.	Ch. Mounika		5) Ch. Mounika	5) Ch. Mounika	5) Ch. Mounika	5) Ch. Mounika	5) Ch. Mounika
6.	J. Sushmitha		6) J. Sushmitha	6) J. Sushmitha	6) J. Sushmitha	6) J. Sushmitha	6) J. Sushmitha
7.	K. Uma Meghana		7) K. uma meghana	7) K. uma meghana	7) K. uma meghana	7) K. uma meghana	7) K. uma meghana
8.	N. Siva Naga Lakshmi		8) N. Siva Naga lakshmi	8) N. Siva Naga lakshmi	8) N. Siva Naga lakshmi	8) N. Siva Naga lakshmi	8) N. Siva Naga lakshmi
9.	Sk. Angel		9) Sk. Angel	9) S. Angel	9) Sk. Angel	9) Sk. Angel	9) Sk. Angel
		I B.Sc Sem-I	(1) Borazole, structure of Diborane	(2) Catalytic & magnetic property of d-block	(3) Ion exchange method & difference b/w actinides & lanthanides	(1) Relation b/w van der walls constant & critical constant	(1) Elevation of depression of F.P.
1.	B. Sureka		1) B. Sureka	1) B. Sureka	1) B. Sureka	1) B. Sureka	1) B. Sureka
2.	D. Iswarya		2) D. Iswarya	2) D. Iswarya	2) D. Iswarya	2) D. Iswarya	2) D. Iswarya
3.	G. Vasundhara		3) G. Vasundhara	3) G. Vasundhara	3) G. Vasundhara	3) G. Vasundhara	3) G. Vasundhara
4.	J. Varshini		4) J. Varshini	4) J. Varshini	4) J. Varshini	4) J. Varshini	4) J. Varshini
5.	K. Naga devi		5) K. Naga devi	5) K. Naga devi	5) K. Naga devi	5) K. Naga devi	5) K. Naga devi
6.	L. Sharmila		6) L. Sharmila	6) L. Sharmila	6) L. Sharmila	6) L. Sharmila	6) L. Sharmila
7.	M. Madhu priya		7) M. Madhu Priya	7) M. Madhu Priya	7) M. Madhu Priya	7) M. Madhu Priya	7) M. Madhu Priya
8.	N. Varshini		8) N. Varshini	8) N. Varshini	8) N. Varshini	8) N. Varshini	8) N. Varshini
9.	N. prasanna		9) N. prasanna	9) N. prasanna	9) N. prasanna	9) N. prasanna	9) N. prasanna
10.	P. Manga		10) P. Manga	10) P. Manga	10) P. Manga	10) P. Manga	10) P. Manga
11.	R. Bimala		11) Rayala Bimala	11) Rayala Bimala	11) Rayala Bimala	11) Rayala Bimala	11) Rayala Bimala

H. Sree [signature]

PRINCIPAL
S.K.R. COLLEGE FOR WOMEN
NITHAKARPILLI

S.K.R GOVERNMENT DEGREE COLLEGE (WOMEN) :: RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

REMEDIAL COACHING

Name of the Lecturer: 1) Dr. K. Sunitha 3) Dr. Ch. V. V. Srinivas 2) V. B. T. Sundari 4) N. Swathi | Class: III B.Sc | Semester: V | Year: 2022-23

S.NO	Name of the Student	Marks Obtained in the previous semester IV	Topic Covered: 1) Explain ppt, CO_2 & post ppt (Dt. 20/2/23)	1) Accuracy 2) precision 3) Rf Value (Dt. 23/2/23)	1) Error classification & paper chromatography (Dt. 01/3/23)	1) Distribution law & thin layer chromatography (Dt. 4/3/23)	1) Ion Exchange material & Resin 2) HPLC (Dt. 6/3/23)	Marks Obtained in the Internal exam after remedial coaching	Signature of the Student	Remarks
1	Podiyam. Sunitha	F	✓	Ab	✓	✓	✓	F	Podiyam. sunitha	
2	S. Surya Teja Sri	F	✓	✓	✓	✓	Ab	D	S. Surya Teja sri	
3	T. Swarna	F	✓	✓	✓	✓	✓	A	T. Swarna	
4	K. Sangeetha	F	✓	Ab	✓	✓	✓	A	K. Sangeetha	
5	B. Deepika	F	✓	✓	✓	✓	✓	B+	B. Deepika	
6	T. Sandhya Rani	D	✓	✓	✓	✓	✓	O	T. Sandhya Rani	
7	K. Pranitha	F	✓	✓	✓	✓	✓	D	K. Pranitha	
8	T. Ranjitha	F	Ab	✓	✓	✓	✓	D	T. Ranjitha	
9	Ch. Sravia	F	✓	✓	✓	✓	✓	A	Ch. Sravia	
10	V. Pravitha	F	✓	✓	Ab	✓	✓	B+	V. Pravitha	
11										
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VBT Sund

SKR GOVERNMENT DEGREE COLLEGE(W), RAJAMAHENDRAVARAM

Discovery of Medicines

On 27thMarch 2023 at 10:00 A.M

zoomMeet :https://us06web.zoom.us/j/89738543721?pwd=RER1UGVvUHlDbi8xTW44WW1JTXVRQT09

YouTubeLive:https://youtube.com/live/7tegzbY6ONA?feature=share

SKR GOVERNMENT DEGREE COLLEGE(W), RAJAMAHENDRAVARAM

BRIEF REPORT ON WEBINAR

The Department of Chemistry organised a webinar

Topic- Discovery of Medicines" on **27thMarch2023at10:00A.M**,

through the **ZOOM** platform.

College Principal Dr.P.RaghavaKumari started with opening remarks and explained the essence of the Webinar.

1) Dr Paul Douglas Sanasi,Associate Professor,AU College of Engineering(A), Andhra University has deliveredKey note address on the topic ,the importance of the drug synthesis, analysis of impurities and identification of source of impurities at lower concentrations during the metabolism.

2) Dr SrinivasaRaoKarra, Director of Chemistry,Avilar Therapeutics,Massachusetts, USA. He explained about the discovery of medicines, causes for diseases and functions of medicines to control the diseases.

3)Dr B .Satyanarayana Assistant Professor Department of Chemistry, MGM PG College, Itarsi, Madhya Pradesh explained the history and discovery of medicine and drug delivery systems.

We received good response from the audience and they gave very good feedback.

We thank Commissioner of Collegiate Education Dr Pola Bhaskar, Principal Dr P RaghavaKumari ,HODs ,faculty members, participants and other officials for their active support for making the program very successful.

In this webinar from all over India 329 teachers, students, academicians and researchers participated actively.

Principal

SKRG D C (W),

Rajamahendravaram

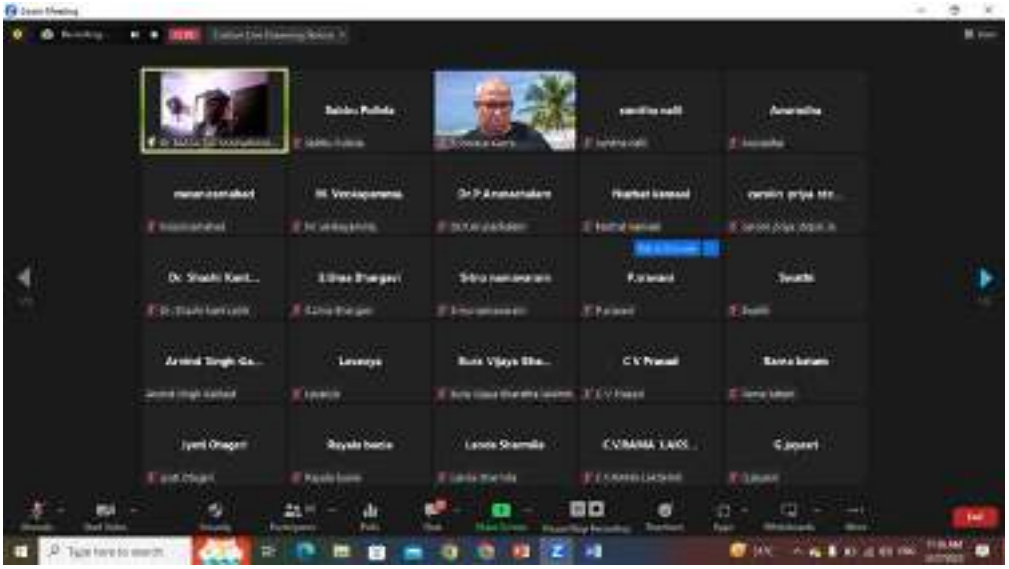
SKR GOVERNMENT DEGREE COLLEGE(W), RAJAMAHENDRAVARAM

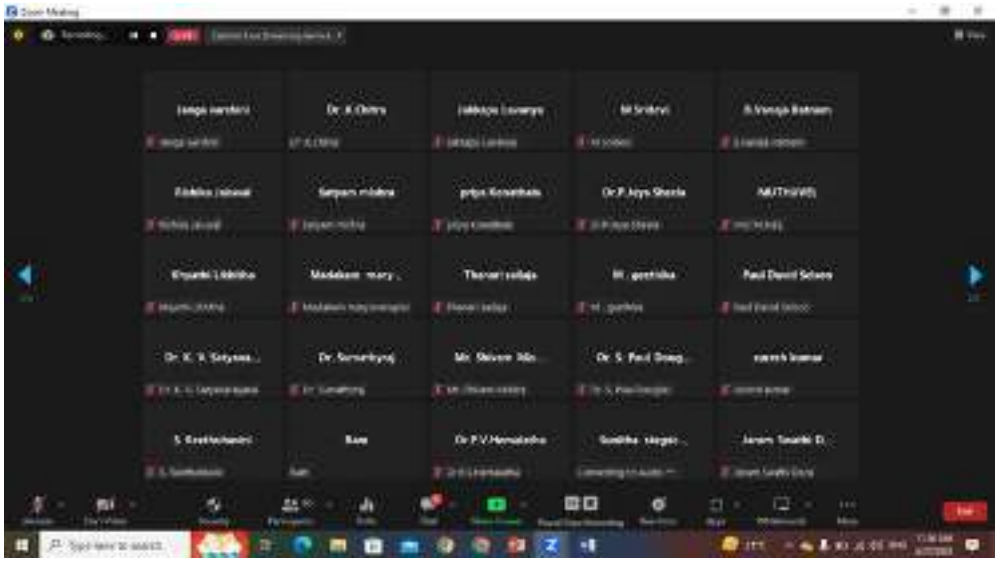
Registrations

Feed back

Certificate model

SKR GOVERNMENT DEGREE COLLEGE(W), RAJAMAHENDRAVARAM





S K R COLLEGE FOR WOMEN
RAJAMAHENDRAVARAM
(Re-Accredited by NAAC B+ Grade) : Affiliated to Adikavi Nannaya University)
DEPARTMENT OF CHEMISTRY
BRIDGE COURSE

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"THE ESSENCE OF EDUCATION LIES IN DRAWING OUT THE VERY BEST THAT IS IN YOU"

A bridge course is a series of classes that help students transition from Intermediate level to graduation by providing them with necessary skills and knowledge about topics that will be covered in their new course.

Objectives :

- The main objective of the course is to bridge the gap between subjects studied at pre-university level and subjects they would be studying in B.Sc Course.
- To enrich the students to learn basic concepts in the subjects of B.Sc I semester.
- To give students confidence and skills to successfully transform to college and new curriculum
- Interactive and Active Learning by doing have been weaved into the Bridge Course.
- Active Learning with the help of other/ peer students.
- To achieve the concept of Assisted Learning.

Standard Operating Procedure

- A Bridge Course for newly admitted B.Sc Students is conducted every year before commencement of First Semester Classes. The syllabus for the B.Sc course is designed in such a way that, equal importance is given to both Chemistry discipline subjects and personality development.
- Bridge Course helps the students to open up, think creatively and become responsible and independent students. I also help smooth transition to Chemistry course. The sound grasp of the fundamentals of Chemistry and Management subjects by the students lays the strong foundation for the entire Three/ Four Years Programme.
- **Highlights of the Bridge Course:**

1) States of Matter

Dr.M.Sunitha, Faculty, Department of Chemistry explained in detail about 1. The three states of matter 2. Intermolecular interaction 3.Hydrogen bonding 4. The gaseous state 5.Boyle's law, Charles law. 6. Gay Lussac's law, Avogadro law 7. Kinetic theory - molecular speeds 8. Liquid state 9. Vapour pressure 10. Surface tension 11.Viscosity. lecture come demonstration method atomic model blackboard

2) Periodic table

. Smt. V.B.T.Sundari Faculty, Department of Chemistry explained about Overview of Periodic table Periodic trends in properties of Elements - a) Atomic radius b) Ionization potential c) Electro negativity d) Ionic radius e) Density.

3) Fundamentals of Organic Reaction Mechanism:

Smt. V.B.T.Sundari, Department of Chemistry explained about the basic concepts stability of Carbocation, Carbanion, and Carbon free radical 2. Types of Reagents- Electrophiles and Nucleophiles 3.Curved arrow notations, cleavage of bond-homolytic and heterolytic cleavage 4. Resonance effect, Inductive effect, Mesomeric effect and Steric effect 5.Types of reactions- Addition, Elimination, Substitution, and Rearrangement

4) Structure of Atom:

Dr.M.Sunitha, Faculty, Department of Chemistry gave an Overview of Structure of Atom Quantum number - i) Principal quantum number ii) Azimuthal quantum number iii) Magnetic quantum number iv) Spin quantum number, Shape of orbitals - a) s – orbital b) p – orbital c) d – orbital a) Aufbau principle b) Pauli's exclusion principle c) Hund's rule.

ACTION PLAN / REPORT ON BRIDE COURSE FOR THE ACADEMIC YEAR 2022–2023

****

Date	Time/ Hour	Topic	Content/Activity	Resource Person
07/11/22	4th	States of Matter	1. The three states of matter 2. Intermolecular interaction 3.Hydrogen bonding 4. The gaseous state 5.Boyle's law, Charles law. 6. Avogadro law 7. Kinetic theory - molecular speeds 8. Liquid state 9. Vapour pressure 10. Surface tension 11.Viscosity.	Dr.M.Sunitha
10/11/22	2rd	Overview of Periodic table	Periodic trends in properties of Elements - a) Atomic radius b) Ionization potential c) Electro negativity d) Ionic radius e) Density.	Smt.V.B.T.Sundari
11/11/22	4th	Fundamentals of Organic Reaction Mechanism	1. stability of Carbocation, Carbanion, and Carbon free radical 2. Types of Reagents- Electrophiles and Nucleophiles 3.Curved arrow notations, cleavage of bond-homolytic and heterolytic cleavage 4. Resonance effect, Inductive effect, Mesomeric effect and Steric effect 5.Types of reactions- Addition, Elimination, Substitution, and Rearrangement	Smt.V.B.T.Sundari
12/11/22	1st	Structure of Atom	i) Principal quantum number ii) Azimuthal quantum number iii) Magnetic quantum number iv) Spin quantum number, Shape of orbitals - a) s – orbital b) p – orbital c) d – orbital a) Aufbau principle b) Pauli's exclusion principle c) Hund's rule	Dr.M.Sunitha

S K R COLLEGE FOR WOMEN
RAJAMAHENDRAVARAM
(Re-Accredited by NAAC B+ Grade) : Affiliated to Adikavi Nannaya University)
DEPARTMENT OF CHEMISTRY
BRIDGE COURSE – 2022-2023

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1) **Dr.M.Sunitha, Faculty, Department of Chemistry giving an Overview of States of Matter**

2) **Smt. V.B.T.Sundari, Faculty, Department of Chemistry explain about Fundamentals of Organic Reaction Mechanism**

3.Dr.M.Sunitha, Faculty, Department of Chemistry giving an Overview of structure of Atom.

4. Smt. V.B.T.Sundari, Faculty, Department of Chemistry explain about Fundamentals of Periodic table

4

REVIEW OF ETHICAL ISSUES IN MARKETING

Dr. Ch. V.V. SINIVAS
Lecturer in Chemistry, SKR Government Degree College, Rajamahenndravaram

ABSTRACT

Marketing is a task-oriented discipline. The task of the marketing manager is to structure the relations between his firm and its customers so as to further the achievement of the firm's business aims. Marketing, as a subject of study, aims to improve the marketing manager's efficiency in doing this job. Marketing ethics is the systematic study of how moral standards are applied to marketing decisions, behaviours, and institutions. Because marketing is a process inherent to most organisations, marketing ethics should be viewed as a subset of business ethics; thus, much of what is written about business ethics applies to marketing ethics as well. At the outset, it is also useful to distinguish between positive and normative marketing ethics. Positive marketing ethics looks at marketing practices from the standpoint of "what is." For example, specifying the percentage of organisations that have codes of ethical marketing practice or tracking the number of violations that deal with deceptive advertising would be examples of positive marketing ethics. In contrast, normative marketing ethics deals with how marketing ought to operate according to some moral standard or theory. When the words "marketing ethics" appear in the general media or business press, the reports typically describe a marketing strategy, tactic, or policy that some constituency feels is "unfair" or "exploitive" or "deceptive". The main objective of the paper is to discuss how marketing practices might become more consumer-friendly, socially compatible, or put in philosophical terms, how marketing might be normatively improved.

Key words: Ethical issues, Marketing practice, Pricing, Distribution, Advertisement

1. INTRODUCTION:

Because marketing is the organisational process focused directly on exchange, ethical issue in marketing have existed since the inception of trade. The Roman philosopher Cicero counselle merchants to avoid raising prices too high in times of shortage, lest they alienate their customer who might shun them when supplies were more abundant. However, the analysis of marketing ethic from a more systematic and analytical standpoint has only begun to develop in the past 40 year Since the mid-1960s, the literature on marketing ethics has grown substantially. While cynics vie the term marketing ethics as an oxymoron, no doubt due partly to the frequent questionable activiti of some used car dealers, advertising copyrighters, and telemarketers, there exist clear and articulat standards of proper behaviour that are "peer endorsed" by marketing practitioners. In other word marketing managers themselves have expressed their opinions as to the ideal obligations inherent the honest and forthright conduct of marketing. Perhaps the best known of these codes of conduct the American Marketing Association's (AMA's) "Statement of Ethical Norms and Values f Marketers." This document specifically states that marketers serve not only their compa enterprises but also act as stewards of society in creating, facilitating, and executing the efficient a effective exchange transactions that are part of a greater economy. The AMA statement recogni the duties that marketers have to all stakeholders (e.g., customers, employees, investors, chan members, regulators, and the host community) as they discharge their job responsibilities. T document explicitly warns that marketers must not knowingly do harm in executing their selli responsibilities, that marketers have a duty to foster trust in the marketing system, and that th should embrace basic marketplace values, including truth telling, genuine service to custom avoidance of practices acclaimed to be unfair, and an adherence to honest and open communicati with clients. Significantly, it states that marketing organisations have responsibilities of "citizensh just as individuals do. Documents such as the AMA Statement represent hard evidence that there bedrock ethical standards and values that have been agreed on by numerous marketing practitioner

ISBN: 978-93-92257-52-0

SKR GOVERNMENT DEGREE COLLEGE (W),RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

BEST PRACTICE 2022-23

ACTIVITY-1 CAMPAIGN IN CONNECTION WITH WORLD OZONE DAY

1. Title of the Practice

CAMPAIGN AGAINST USAGE OF PP CARRY BAGS

2. Objectives of the Practice

Now a day's people are addicted to PP carry bags usage. The PP carry bags are not biodegradable hence their usage should be stopped.

3. The Context

Soil will lose its fertility, thereby plants doesn't grow to the expected extent which leads to shortage of food grains. In order to overcome this problem the usage of PP carry bags should be stopped and in place of these bags made up of biodegradable materials like cloths or papers should be used.

4. The Practice

Department of Chemistry is in practice of campaigning about the hazardous dangers of usage PP covers and the usage of bags made up of biodegradable materials.

5. Evidence of Success

Department of Chemistry stitched cloth bags and involved the students in making of paper bags. These are distributed to the RMC sanitary workers and instructed them to use these bags instead of PP carry bags. The RMC sanitary workers expressed their feelings with full satisfaction.

6. Problems encountered and resources required

The preparation of cloth bags is an expensive task. It is not possible for the staff of the department to contribute always, hence financial aid should be supported to continue the practice.


CHEMISTRY LAB-1
Department of Chemi
OZONE FOR LIFE


GPS Map Camera

SKR GOVERNMENT DEGREE COLLEGE (W),RAJAMAHENDRAVARAM

DEPARTMENT OF CHEMISTRY

BEST PRACTICE 2021-22

ACTIVITY 2: EXHIBITION CUM SALES OF PLANTS:

To promote the custom of bringing plants rather than bouquets to celebrations on the eve of the new year, the Department of Chemistry organised an exhibition and sale of plants.

MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEEN
DEPARTMENT OF CHEMISTRY
SMT.KANDUKURI RAJYALAKSHMI COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM, ANDHRAPRADESH
AND
QREN LIFESCIENCES PVT. LTD.
AMEERPET, HYDERABAD,
TELANGANA, INDIA

This Memorandum of Understanding (MOU) sets for the terms and understanding for training and employment possibilities for the students of "Department of Chemistry", S.K.R.COLLEGE FOR WOMEN, Rajamahendravaram.

Objectives of the MOU:

The objectives of MOU are:

- To promote and enhance interest between students of Chemistry Department, Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and QREN LIFESCIENCES PVT.LTD., AMEERPET, HYDERABAD, TELANGANA, INDIA.
- To provide advice for implementation of quality education at Department of Chemistry, Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram.
- To bridge the gap between the requirements of the potential employers and education by providing skill-development programmes for the improvement of employability of the students.
- The two institutions will encourage direct contact and cooperation between students and experts in this field for the exchange of facilities and equipment.
- The above goals will be accomplished by the activities such as educational visit, short-term training and internships.
- Recognise the mutual interest in the fields of training and development and dissemination of knowledge.

Proposed modes of Collaboration

Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and QREN LIFESCIENCES PVT.LTD., Ameerpet, Hyderabad, Telangana, India proposed to collaborate through the following:

- Cooperation and promotion of education, training and research in the areas of mutual interest.
- Any other appropriate mode of interaction agreed upon between Department of Chemistry, Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and QREN LIFESCIENCES PVT.LTD., Ameerpet, Hyderabad, Telangana.
- A specific plan will be worked out by the institute depending upon availability of resource.
- A specific agreement will be entered into for each activity.

TERMS AND CONDITIONS

Duration: This MOU is at will and may be modified by mutual consent of authorized officials from the list partners.

Coordinators: College and QREN LIFESCIENCES PVT.LTD., Ameerpet, Hyderabad, Telangana will designate persons who will have responsibility for co-ordination and implementation of this agreement.

Signed in Duplicate: This MOU is executed in duplicate with each copy being an official version and having equal legal validity.

By signing below the institutes acting by their duly authorised Officer, have caused this memorandum of understanding to be executed effective as of the day and year first above written on today i.e., on 01-04-2022 for a period of TWO academic years.

Principal
S.K.R.College for Women,
Rajamahendravaram
East Godavari- AP

PRINCIPAL
S.K.R. COLLEGE FOR WOMEN
HITHAKARINI SAMAJ
Endowments Dept. Govt.of Andhra Pradesh
RAJAMAHENDRAVARAM

QREN LIFESCIENCES PVT.LTD.
Ameerpet, Hyderabad
Telangana -500016

QREN LIFE SCIENCES PVT. LTD.
6-3-852/2B/11, Aparajita Colony,
Lal Bungalow, Ameerpet,
Hyderabad-500 016.

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

DEPARTMENT OF CHEMISTRY
SMT. KANDUKURI RAJYALAKSHMI COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM,
ANDHRA PRADESH, INDIA

AND

VASISHTA PESTICIDES PRIVATE LIMITED, AVIDI,
KOTHAPETA MANDAL, EAST GODAVARI DISTRICT,
ANDHRA PRADESH, INDIA

This Memorandum of Understanding (MOU) sets for the terms and understanding for training and employment possibilities for the students of "Department of Chemistry", SKR College for Women, Rajamahendravaram.

Objectives of the MOU:
The objectives of the MOU are:

- To promote and enhance interest between students of Chemistry Department, Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and Vasishta Pesticides Private Limited.
- To provide advice for implementation of quality education at Department of Chemistry, Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram.
- To bridge the gap between the requirements of the potential employers and education by providing skill-development programmes for the improvement of employability of the students.
- The two institutions will encourage direct contact and cooperation between students and experts in this field for the exchange of facilities and equipment.
- The above goals will be accomplished by the activities such as educational visit, short-term training and internships.
- RECOGNISE the mutual interest in the fields of training and development and dissemination of knowledge.

Proposed modes of Collaboration
Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and Vasishta Pesticides Private Limited proposed to collaborate through the following:

- Co-operation and promotion of education, training and research in the areas of mutual interest.
- Any other appropriate mode of interaction agreed upon between Department of Chemistry, Smt. Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and M/s. Vasishta Pesticides Private Limited, Avidi, Kothapeta Mandal, East Godavari, A.P.
- A specific plan will be worked out by the institute depending upon availability of resource.
- A specific agreement will be entered into for each activity.

TERMS AND CONDITIONS

Duration: This MOU is at will and may be modified by mutual consent of the authorized officials from the list partners.

Coordinators: College and M/s. Vasishta Pesticides Private Limited, Avidi, Kothapeta Mandal, East Godavari, Andhra Pradesh will designate persons who will have responsibility for co-ordination and implementation of this agreement.

Signed in duplicate: This MOU is executed in duplicate with each copy being an official version and having equal legal validity.

By signing below the institutes acting by their duly authorized officer, have caused this memorandum of understanding to be executed effective as of the day and year first above written (i.e., from 27-01-2021).

Principal 27.1.2021
SKR College from Women
Rajamahendravaram
East Godavari – A. P.

PRINCIPAL
S.K.R. COLLEGE FOR WOMEN
HITHAKARINI SAMAJ
Endowments Dept. (Govt. of A.P.)
RAJAHMUNDRY.

S.K.R. COLLEGE FOR WOMEN Estd 1949 RAJAHMUNDRY

For VASISHTA PESTICIDES PVT. LTD.
(K. Vijaya Rama Raju)
Managing Director
M/s.Vasishta Pesticides Limited
Avidi, Kothapeta Mandal
East Godavari – A. P.

HETERO

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEEN

DEPARTMENT OF CHEMISTRY

SMT.KANDUKURI RAJYALAKSHMI COLLEGE FOR WOMEN,

RAJAMAHENDRAVARAM, ANDHRAPRADESH

AND

HETERO DRUGS , HYDERABAD,

TELANGANA, INDIA

This Memorandum of Understanding (MOU) sets for the terms and understanding for training and employment possibilities for the students of "Department of Chemistry", S.K.R.COLLEGE FOR WOMEN, Rajamahendravaram.

Objectives of the MOU:

The objectives of MOU are:

- To promote and enhance interest between students of Chemistry Department, Smt.Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and HETERO DRUGS, HYDERABAD, TELANGANA, INDIA.
- To provide advice for implementation of quality education at Department of Chemistry, Smt.Kandukuri Rajyalakshmi College for Women ,Rajamahendravaram.
- To bridge the gap between the requirements of the potential employers and education by providing skill-development programmes for the improvement of employability of the students.
- The two institutions will encourage direct contact and cooperation between students and experts in this field for the exchange of facilities and equipment.
- The above goals will be accomplished by the activities such as educational visit, short-term training and internships.
- Recognise the mutual interest in the fields of training and development and dissemination of knowledge.

Hetero Labs Ltd.
7-2-A2, Industrial Estates, Sanath Nagar, Hyderabad-500 018. Telangana, India.
T: +91 40 23704923/25

Proposed modes of Collaboration

Smt.Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and HETERO DRUGS , Hyderabad, Telangana, India proposed to collaborate through the following:

- Cooperation and promotion of education, training and research in the areas of mutual interest.
- Any other appropriate mode of interaction agreed upon between Department of Chemistry, Smt.Kandukuri Rajyalakshmi College for Women, Rajamahendravaram and HETERO DRUGS, Hyderabad,Telengana.
- A specific plan will be worked out by the institute depending upon availability of resource.

TERMS AND CONDITIONS

Duration: This MOU is at will and may be modified by mutual consent of authorized officials from the list partners.

Coordinators: College and HETERO DRUGS , Hyderabad, Telengana will designate persons who will have responsibility for co-ordination and implementation of this agreement.

Signed in Duplicate: This MOU is executed in duplicate with each copy being an official version and having equal legal validity.

By signing below the Institutes acting by their duly authorised Officer, have caused this memorandum of understanding to be executed effective as of the day and year first above written (i.e., from 01-10-2022) for a period of TWO years.

Principal
S.K.R.College for Women,
Rajamahendravaram
East Godavari- A.P

HETERO DRUGS
Hyderabad
Telangana,

Phone : 9908542048

S K R GOVERNMENT DEGREE COLLEGE (WOMEN)

G.O.Ms.No. 28, Higher Education Department, Dated 10-08-2022
Re-Accredited at B+ Grade by NAAC
Affiliated to Adikavi Nannaya University
Opp. T.T.D. Kalyana Mandapam, Danavaipeta, Rajamahendravaram, E.G.Dist. A.P.
www.skrgdcwrjy.ac.in Established 1968 E-mail : skrgdcwrjy@gmail.com

Dr. P. Raghava Kumari
M.Sc., B.Ed., M.Phil., Ph.D
Principal

To
The Registrar,
Adikavi Nannaya University,
Rajamahendravaram

Sir,

Sub :- SKR Government Degree College (Women), Rajamahendravaram – Submission of Feedback Report 2022-23 Reg.

This is to submit that, as an institutional practice, SKR Government Degree College (Women), Rajamahendravaram which is under the jurisdiction of Adikavi Nannaya University, Rajamahendravaram collects feedback on college / curriculum from time to time from its stakeholders.

During the academic year 2022-2023, feedback was collected from students, teachers, parents and alumni. A copy of the feedback report is submitted to your office for your information.

Thanking you, Sir.

SIGNATURE OF THE PRINCIPAL

PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM
East Godavari Dist., Andhra Pradesh

SKR GOVERNMENT DEGREE COLLEGE (WOMEN), RAJAMAHENDRAVARAM

Feedback Report 2022-2023

For the academic year 2022-2023, feedback on the college functioning including teaching learning process was collected from the students, teachers, parents and alumni in online mode. For the students, a feedback form was designed with 20 questions on 20 parameters with 5 options namely – Strongly Agree, Agree, Neutral, Strongly disagree and Disagree.

179 responses collected from the students. Before collection, the purpose of feedback was explained to the students. If the students could not understand any parameter, the mentors explained the parameter and its importance. With the help of the faculty, the IQAC arranged for the analysis of the collected data; the analysis was tabulated and also presented in a graphical format. For the teachers, alumni and parents, a feedback form was customized with 10 questions covering different areas of the college functioning. The analysis report reveals that:

- Stakeholders expressed their opinion that supports the students to prepare for competitive exams.
- More Cultural activities are to be organized in the college

IQAC Coordinator

IQAC Co-ordinator
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM.
East Godavari Dist., Andhra Pradesh

SKR GOVERNMENT DEGREE COLLEGE (WOMEN),

Action Taken Report on Feedback -2022-2023

The feedback report for the academic year 2022-2023 was placed before the staff council meeting chaired by the principal of the college. The council discussed the report in detail. For all the positive feedback about the teaching learning process, the efforts of the teachers were appreciated. The meeting resolved to take the following measures to improve the overall functioning of the college.

Student Centered Learning (SCL) practices in curriculum delivery and transaction were given much emphasis.

Based on the parents & alumnae feedback, PG coaching is continued in a more structured manner and offered support to the students seeking higher education.

The mentors were specifically directed to provide emotional support to students and be accessible to them even out of the classroom, following the spirit of the Mentor Mentee System (MMS) in place.

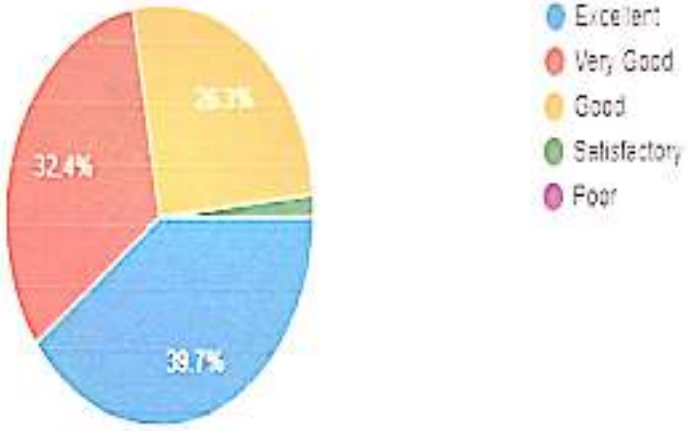
PRINCIPAL
S.K.R. Government Degree College (Women)
RAJAMAHENDRAVARAM.
East Godavari Dist., Andhra Pradesh

S.K.R. GOVERNMENT DEGREE COLLEGE(WOMEN)
RAJAMAHENDRAVARAM(Estd.1968)
(Re-Accredited at B++ Grade by NAAC, Affiliated to Adikavi Nannaya University)

STUDENT FEED BACK ANALYSIS DATA 2022 -23

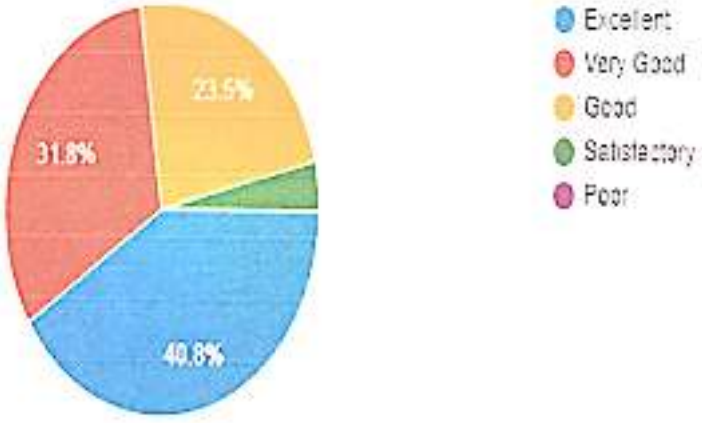
Syllabus completion

179 responses



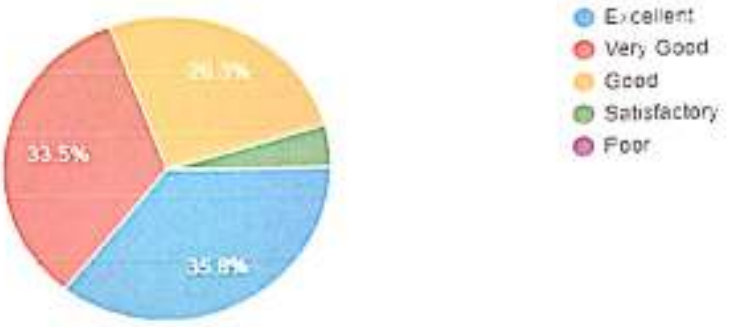
Interest generated while teaching

179 responses



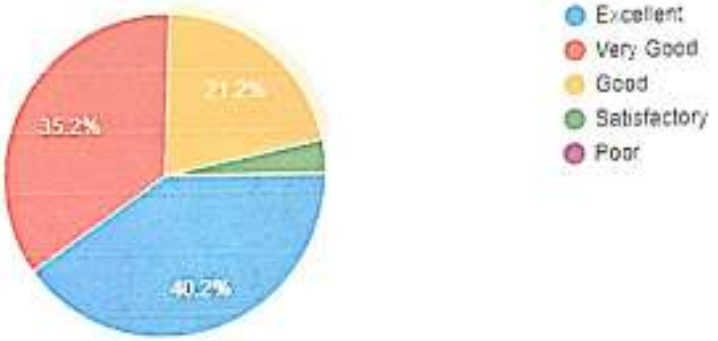
Fairness of the Internal Evaluation

179 responses



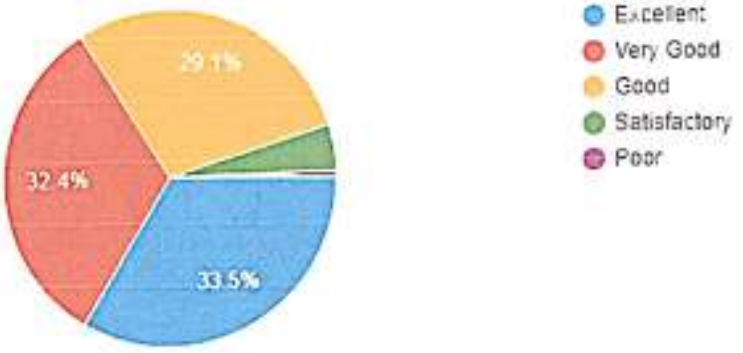
Depth of the Subject

179 responses



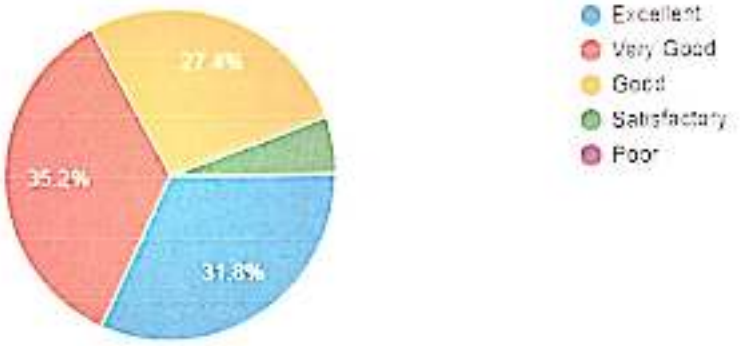
Latest developments taught

179 responses



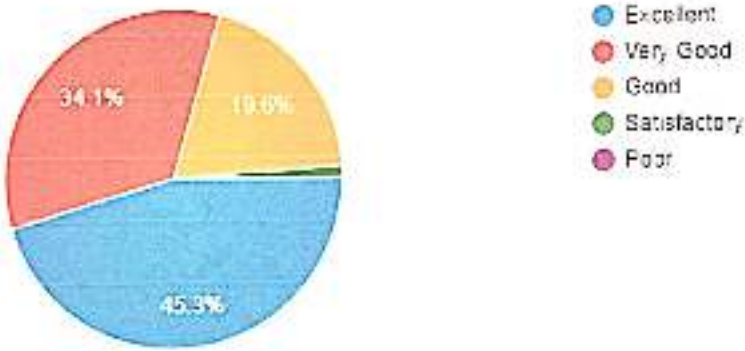
Usage of student centric methods

179 responses



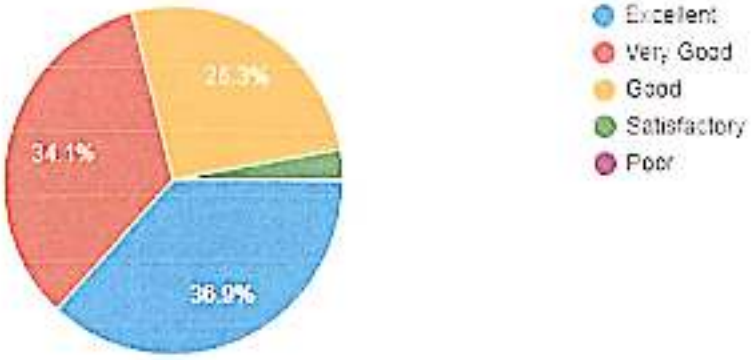
How well is the teacher able to communicate?

179 responses



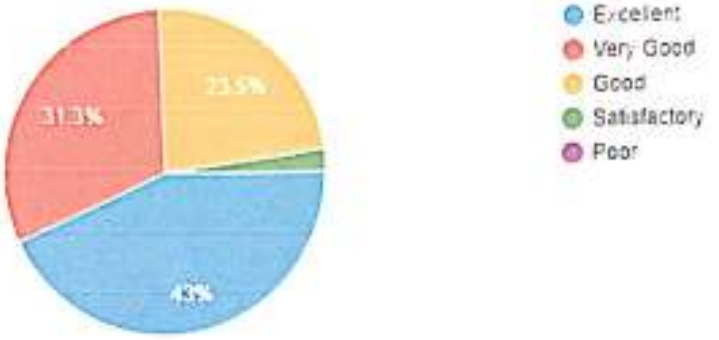
Usage of various teaching models

179 responses



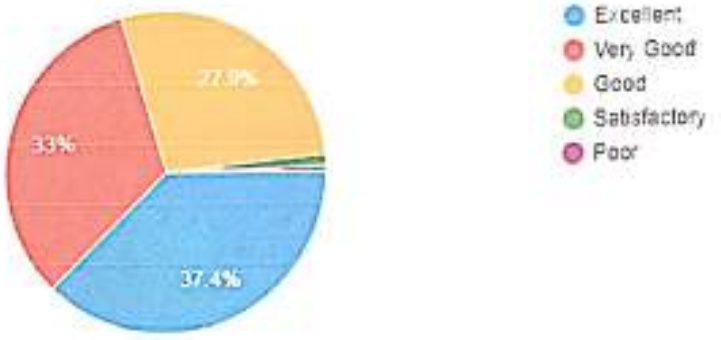
Quality of notes

179 responses



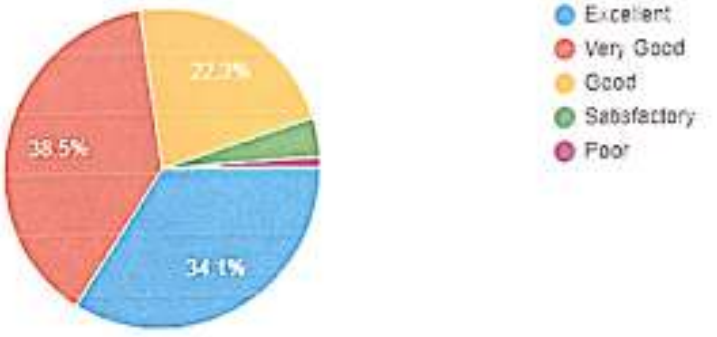
Arranging field visits, guest lectures etc.

179 responses



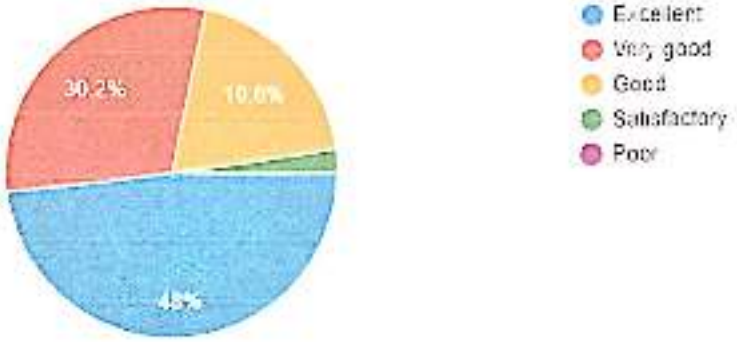
Guidance in reading library books

179 responses



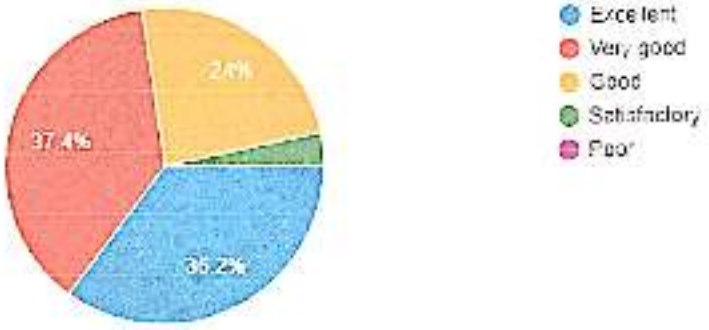
Encouragement to students

179 responses



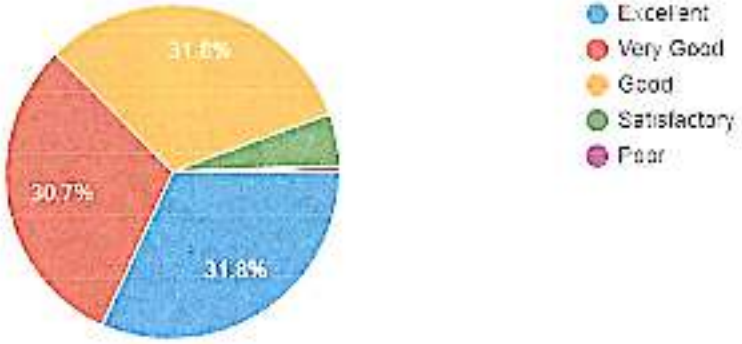
The teacher illustrates the concepts through examples and applications.

179 responses



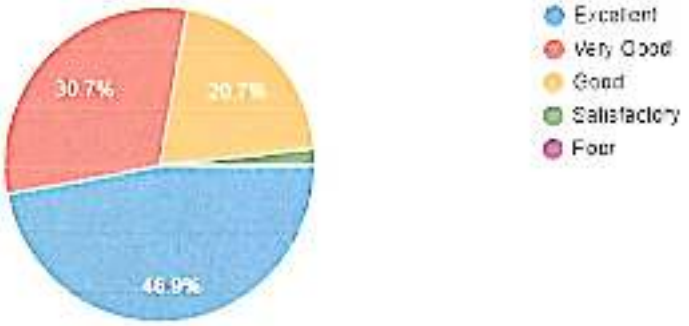
Remedial coaching

179 responses



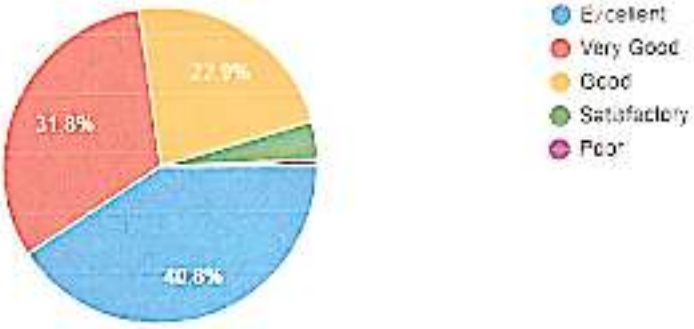
Regularity to the class

179 responses



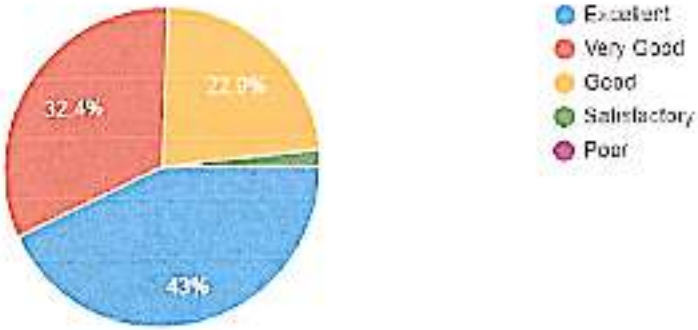
Guide students in co-curricular and extra curricular

179 responses



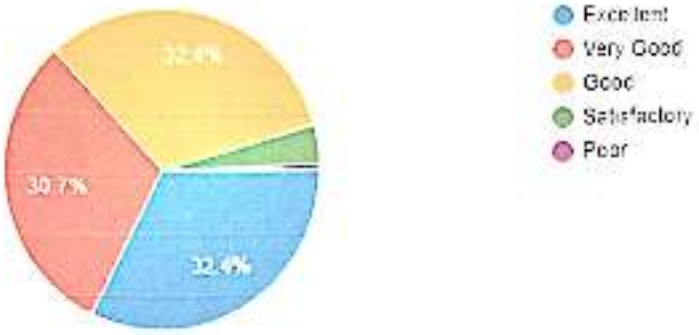
Counseling and career guidance

179 responses



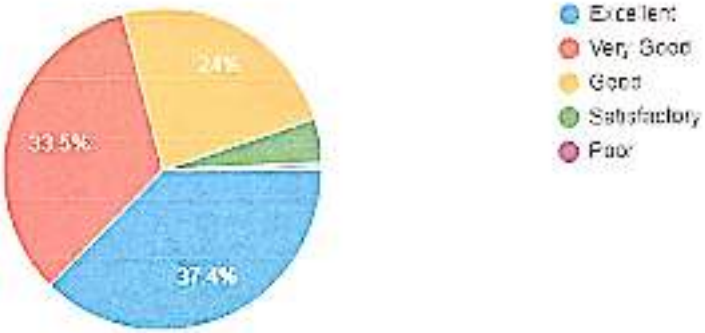
Accessibility outside the class

179 responses



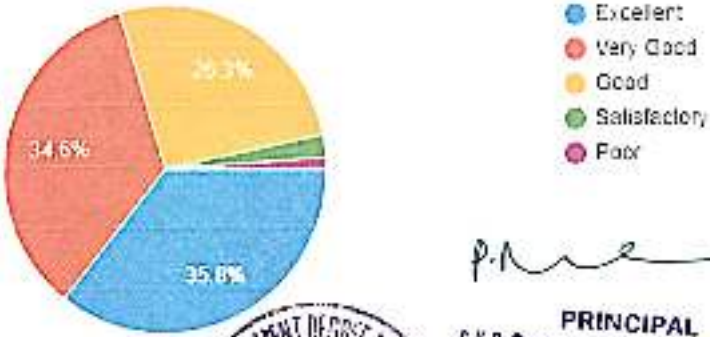
Personal care and attention

179 responses



The teacher uses ICT tools

179 responses



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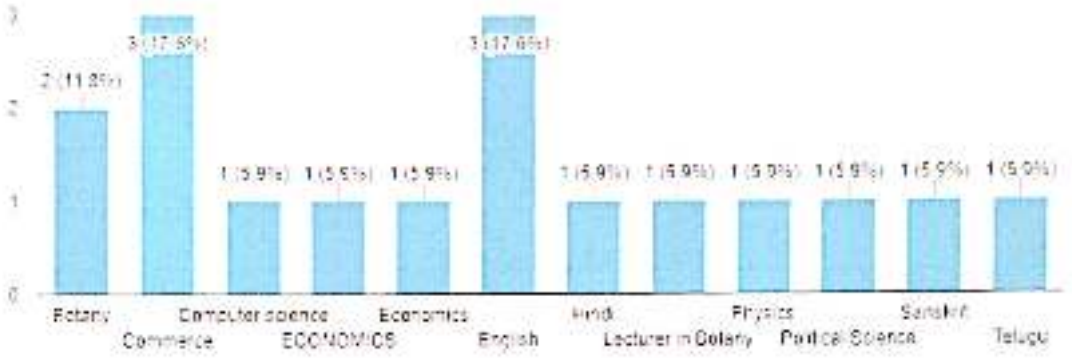
ANALYSIS OF TEACHER FEED BACK REPORT -2022-2023

Department

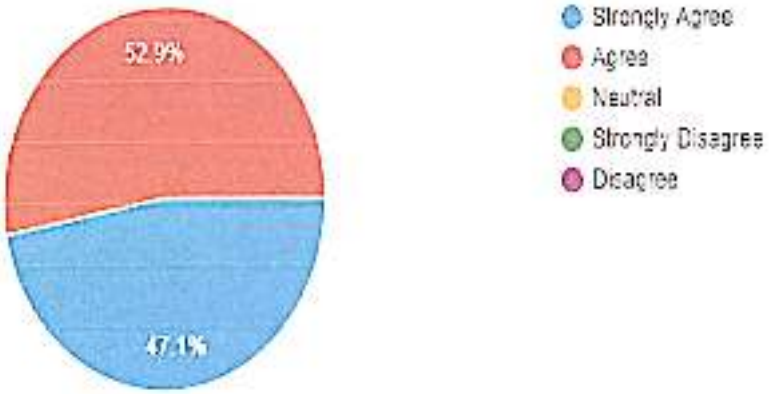
17 responses

Copy



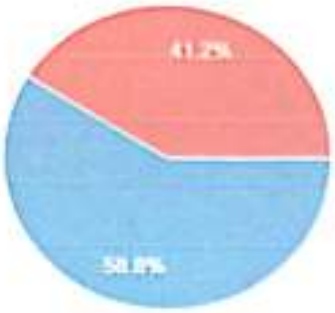
Sufficient facilities for ICT Teaching

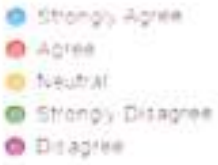
17 responses



Fair & Transparent internal assessment

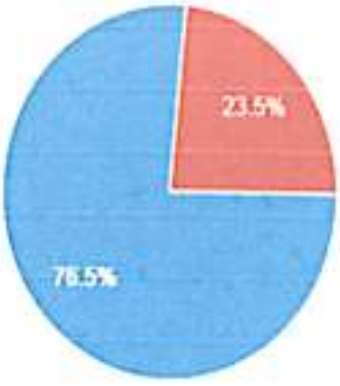
17 responses

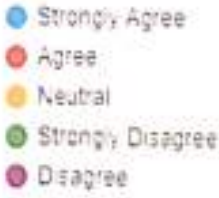




Discipline is good

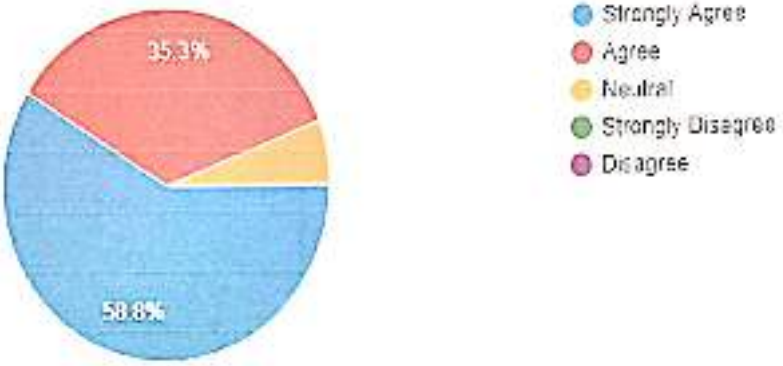
17 responses





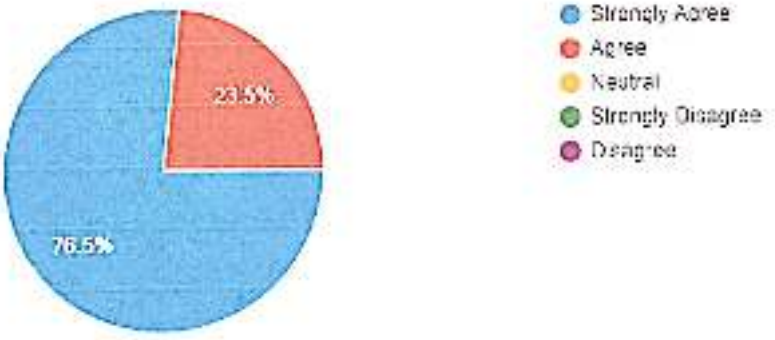
Library can meet students need

17 responses



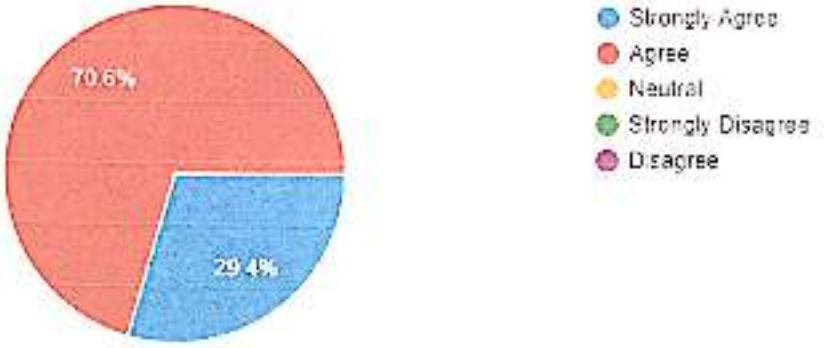
Discipline is good

17 responses



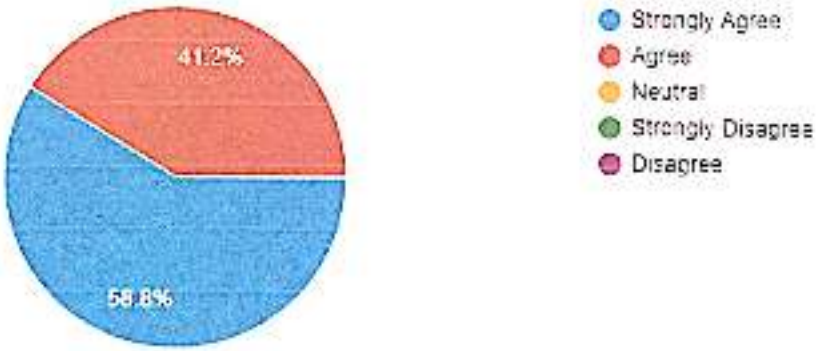
Placement activities are good

17 responses



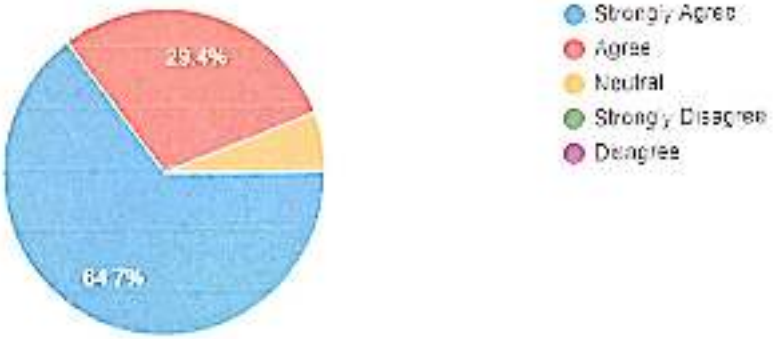
Support for Higher Education is good

17 responses



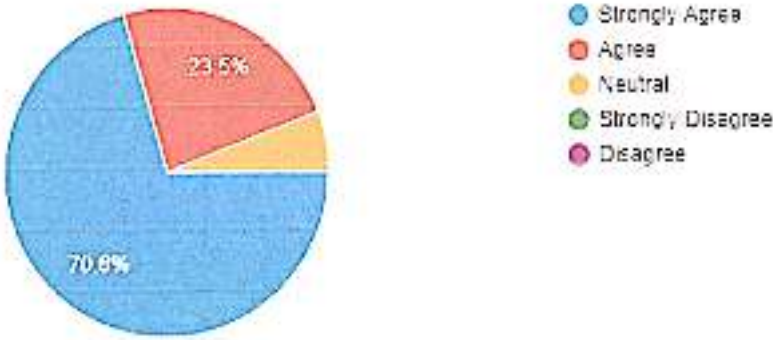
Teachers are Student –Friendly

17 responses



Mentoring system functions well

17 responses



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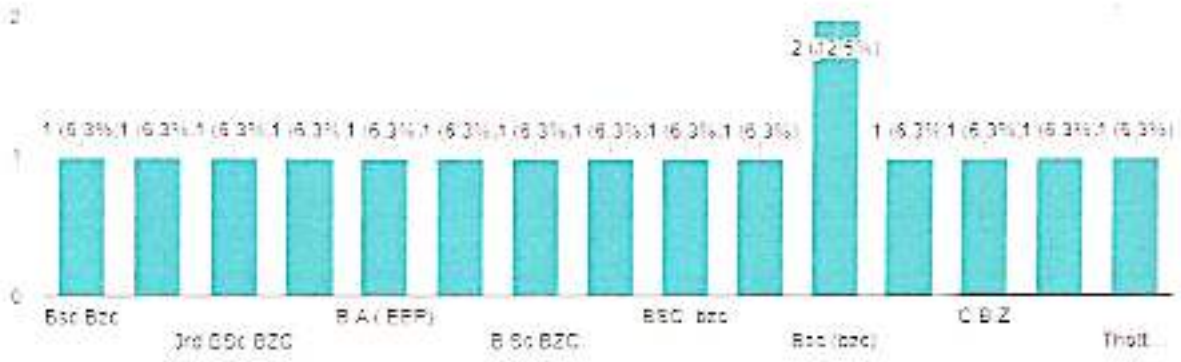
ANALYSIS OF ALUMNI FEED BACK REPORT -2022-2023

Class & Group

Copy

16 responses



Batch

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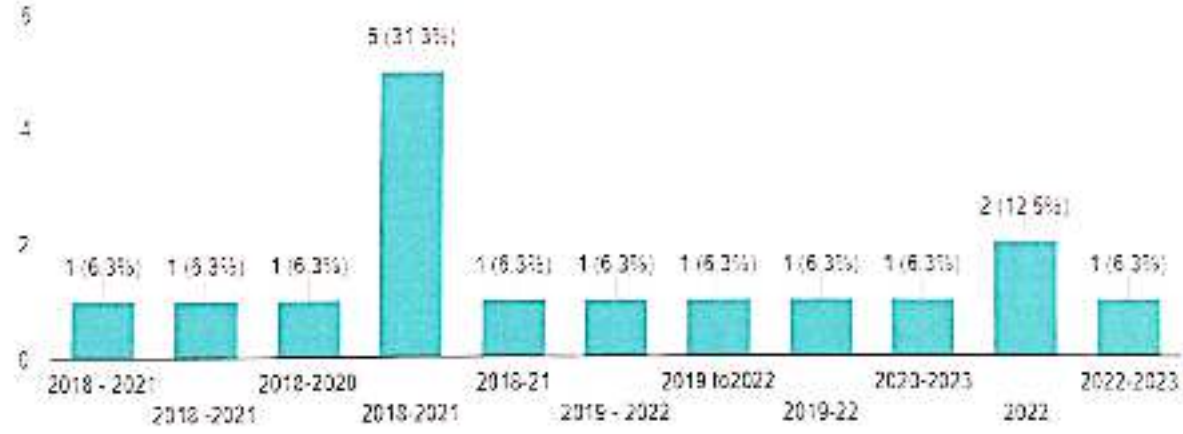
16 responses

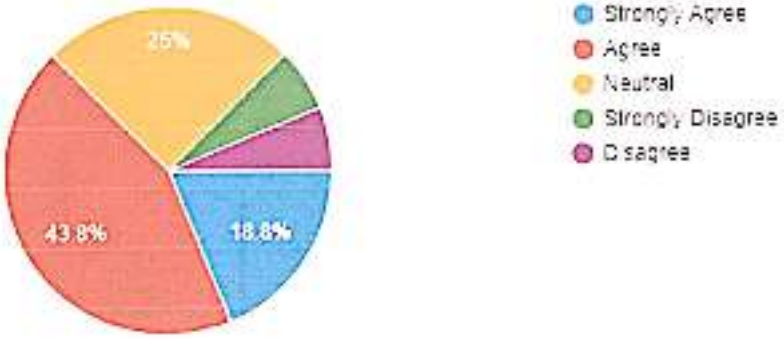


Sufficient facilities for ICT Teaching

16 responses

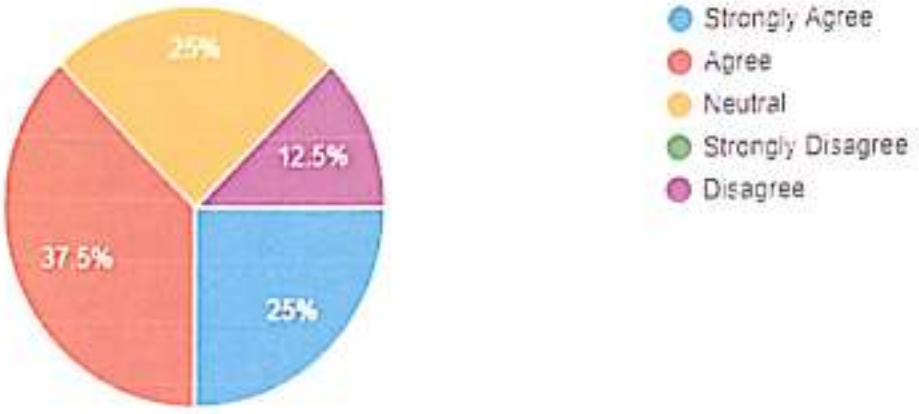
Fair & Transparent internal assessment

16 responses



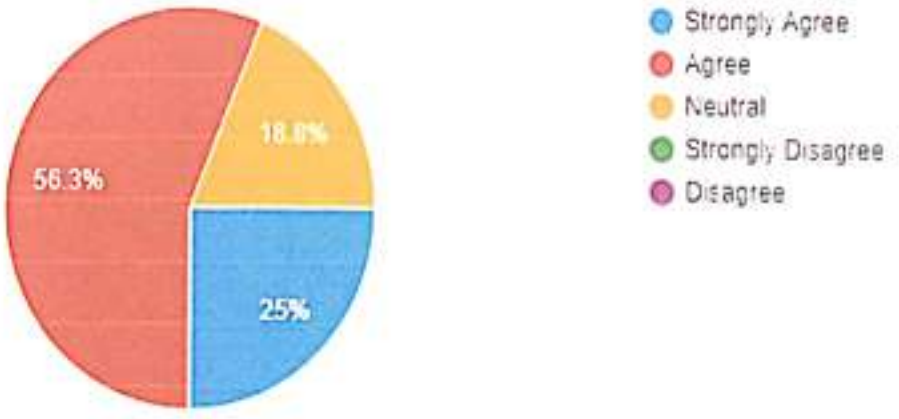
Library can meet students need

16 responses



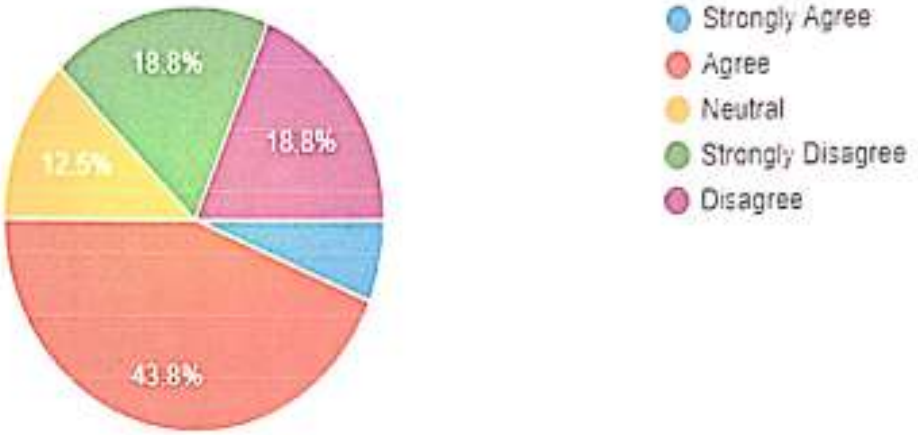
Discipline is good

16 responses



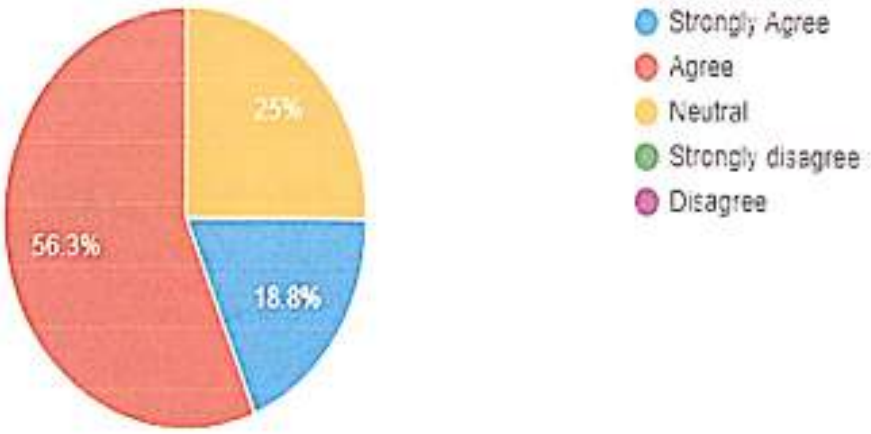
Placement activities are good

16 responses



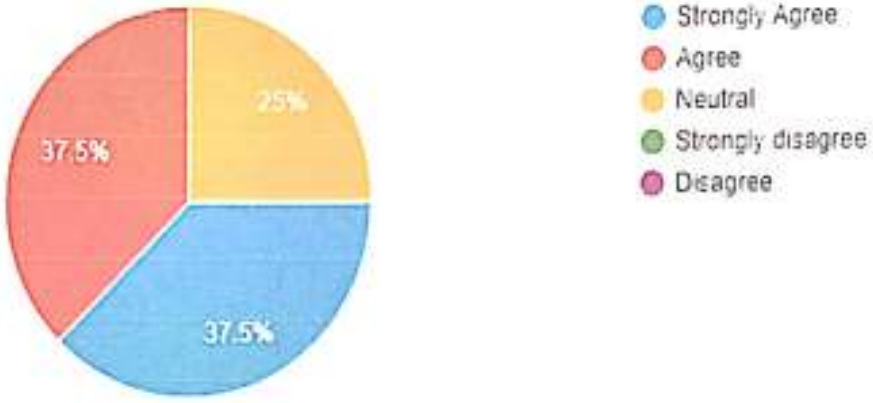
Support for Higher Education is good

16 responses



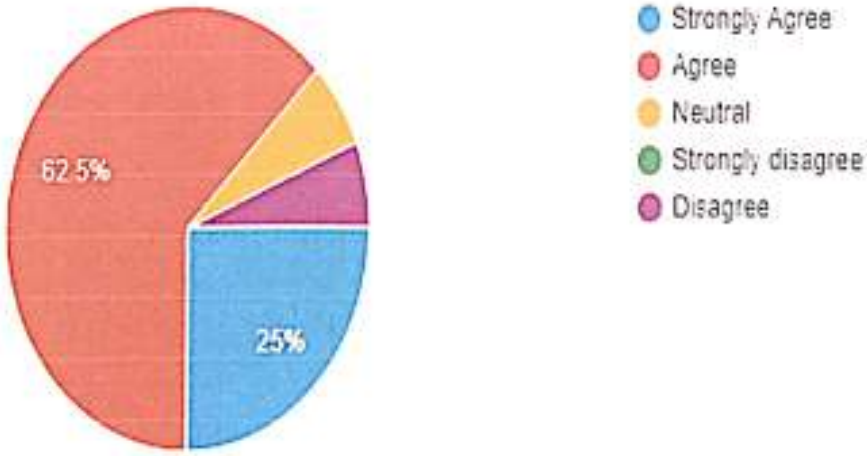
Academic ambience is very good

16 responses



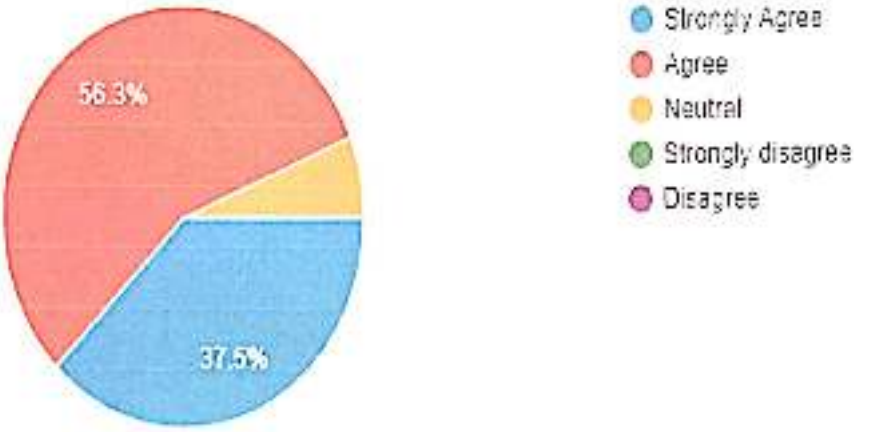
Sports facilities are sufficient

16 responses



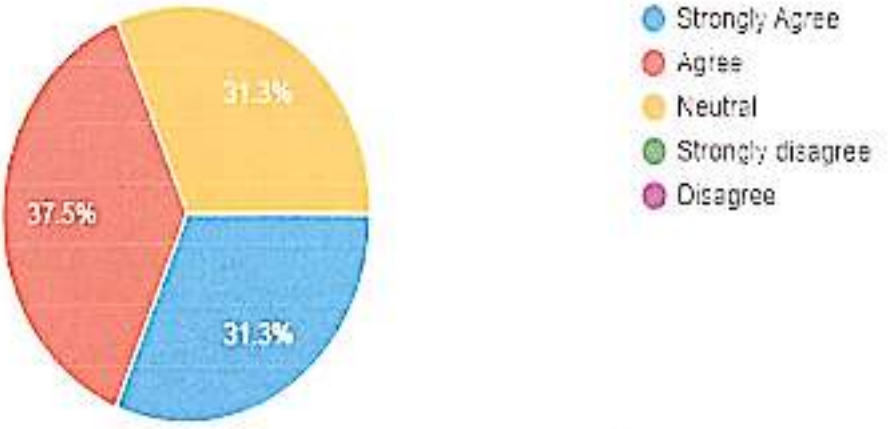
Teachers are Student –Friendly

16 responses



Mentoring system functions well

16 responses



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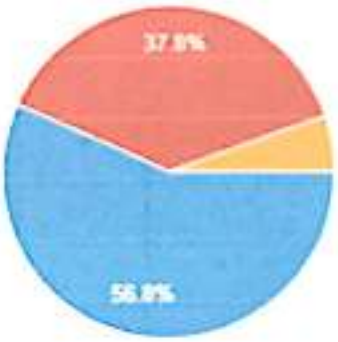
ANALYSIS OF PARENT FEED BACK REPORT -2022-2023

Sufficient facilities for ICT Teaching

37 responses

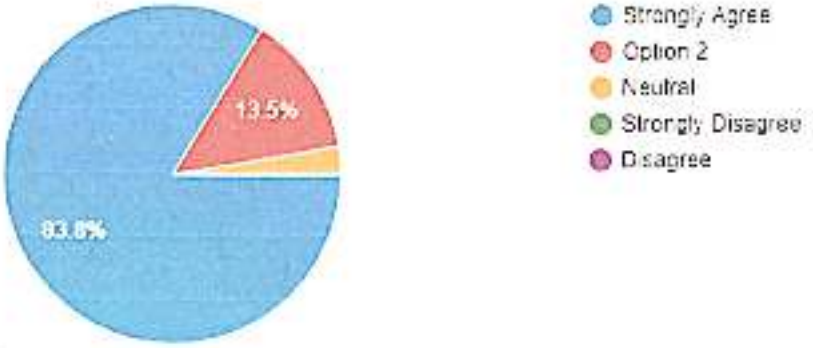
Fair & Transparent internal assessment

37 responses



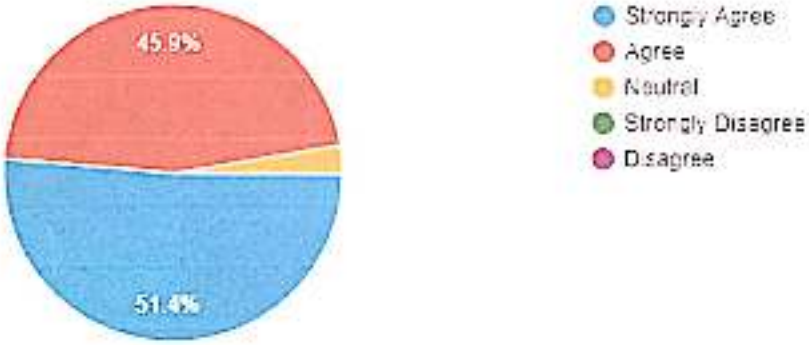
Library can meet students need

37 responses



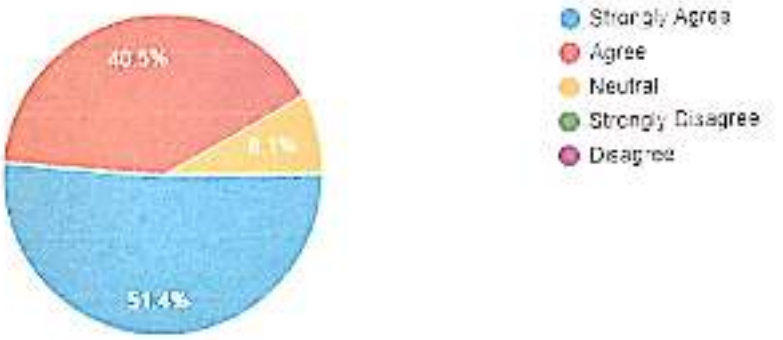
Discipline is good

37 responses



Placement activities are good

37 responses

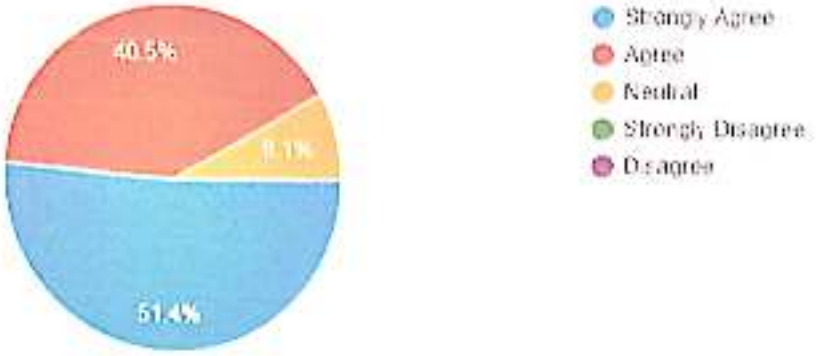


Support for Higher Education is good

37 responses

Academic ambience is very good

37 responses

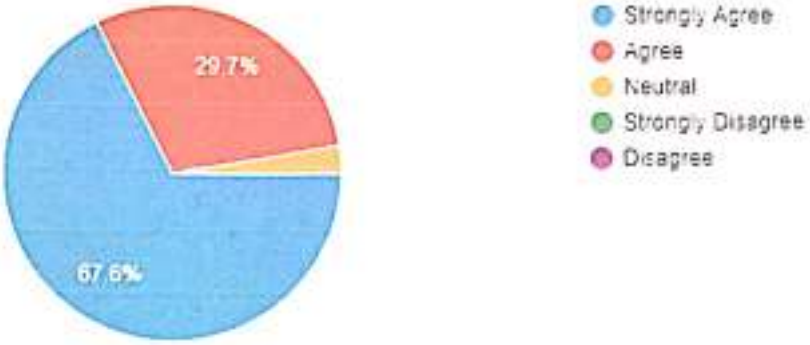


Sports facilities are sufficient

37 responses

Teachers are Student –Friendly

37 responses



Mentoring system functions well

37 responses

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