2021-22

Dr. M Sunitha

Government of Andhra Pradesh Commissionerate of Collegiate Education

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

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

Zone: II  District: East Godavari

| | |
|---|---|
| Name of the College and Address | S.K.R. College for Women - Rajahmundry |
| Name of the Lecturer | Dr. M. Sunitha |
| Name of the Subject | Chemistry |
| Date of Joining in Degree College/Date | 01/12/2003 |

| 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 (W) for Key Indicator | Date of Retirement: Key Indicator Grade Points (KIGP) (A =3; B=2; C=1; D=0) | Key Indicator Wise Weighted Grade Points (KIWWGP) = KIGP X W | KIWWGP as per Academic Advisor's grading | Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| **I-CURRICULAR ASPECTS** | | | | | | | | | |
| 1 | Curricular Planning 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 =5 Grade points/A<br>2)Any four key indicators =2 Grade points/B<br>3)Any two key indicators =1 Grade points/C<br>4)No Indicator=0/D |
| | | 3. Teaching Diary<br>4. Lesson Plans | Course wise/Sem wise Records for the Academic Year | 2x5=10 | | | | | |
| | | 5. Active Participation in IIOS | 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<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade points/C<br>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) Analyzed 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<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade point/C<br>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<br>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)<br>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<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade point/C<br>4)No Indicator=0/D |
| | | 1. Report on Course wise Bridge Courses conducted<br>2. Report on Course wise Remedial coaching conducted | 1.Course wise/Sem wise Reports on Bridge Courses conducted<br>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 Advisor's grading | Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| 5 | Teaching-Learning Process | 1. Report on student centered methods implemented (Course wise)<br>2.Report on implementation of ICT in teaching and learning (Course wise)<br>or<br>Report on implementation of Computer/Internet assisted learning (Course wise)<br>3. Report on the Use of LMS tools (Course wise)<br>4. Contribution for the development of LMS in the concerned subject.<br>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<br>2)Any three key indicators =2 Grade points/B<br>3)Any two key indicator =1 Grade point/C<br>4) Below two=0/D |
| 6 | Teacher Profile and Quality | 1. Report on Seminars/Conferences/ Workshops/ Guest Lectures organized<br>2. Report on Participation in Seminars/Conferences/Workshops/ Guest Lectures/ Invited talks<br>3. Awards and recognition<br>4. Participation in Short term/ Orientation /Refresher courses/FDPs<br>5. E- Content Development /MOOCs (Massive Open Online Courses)<br>6. Additional Qualifications acquired during the last two years | Reports and Certificates | 30 | 30 | B | 60 | | 1)Any five key indicators =3 Grade points/A<br>2)Any three key indicators =2 Grade points/B<br>3)Any two key indicator =1 Grade point/C<br>4) Below two=0/D |
| 7 | Evaluation Process and Reforms | 1. Report on Formative Evaluation (CIA) | Department wise reports regarding<br>1. Mid exams, Seminar Reports, Assignment books, Projects and any other tools of Internal Assessment<br>2. Departmental Internal Marks Register for CIA<br>verified by the Principal. | 10 | 30 | A | 90 | | 1)All four key indicator Metrics =3 Grade points/A<br>2) Metrics 1, 2, 4 =2 Grade points/B 3)Metrics 1, 2,3 =1 Grade point/C<br>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. Announcement and Attainment of Course Outcomes<br>2. Report on Student seminars/ Student demonstrations (Course wise)<br>3. Report on activities like Quiz/ Group discussion/ Poster presentation (Course wise)<br>4. Report on Field trips (Course wise)<br>5. Report on Student Study projects (Course wise) | Course wise Reports | 5x6=30 | 30 | A | 90 | | 1)All five key indicators =3 Grade points/A<br>2)First KI Metric and any three other =2 Grade points/B<br>3)First KI Metric and any two other =1 Grade point/C<br>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<br>2.Major Research Projects<br>3.Consultancy Projects | Letter of intimation and award letters (For Current Year only Either Ongoing OR Completed ) | 5<br>10<br>5 | 20 | D | 0 | | 1)All three key indicators =3 Grade points/A<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key Indicator =1 Grade point/C |
| 10 | Research Publications and Awards | 1. Papers Published in Journals / Chapters published in edited volumes<br>2. Books published as single author<br>3. Books published as Co-Author<br>4. Papers/Chapters published as Co-Author<br>(Note: A maximum of 3 publications in Scopus/Web of Science/ICI or UGC -CARE Listed journals/Any book with ISBN shall be considered)<br>5.Research Guideship 6.Awards in recognition of research work | | 10<br>15<br>10<br>5<br><br><br>10<br>10 | 60 | C | 10 | | 1)Any three key indicators =3 Grade points/A<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade point/C<br>4) No Indicator =0/D |
| 11 | **Extension Activities** | Academic Extension activities through DBCS Faculty Outreach (Curriculum/ Skill/Domain related)<br>Involvement in activities related to community service<br>a. Sensitising the students about the value of Community Service b.<br>Organising the activity<br>(A maximum of 5 Programmes resulting in Community Service like OCB/Swachh Bharat/UBA etc) | Reports in the NAAC format<br>Reports in the NAAC format | 10<br>5+5 | 20 | C<br>B | 10<br>20 | | 1)All three key indicators =3 Grade points/A<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade point/C<br>4)No Indicator=0/D |
| 12 | **Functional MoUs /Collaborations with Govt and Non Governmental Organisations** | 1.Collaboration with University/ Industry/NGO/ Any other Agency<br>2. Consultancy offered<br>3. Amount generated through Consultancy. | MoU's - 5 points Consultancy offered -10<br>Amount generated through Consultancy - 5 points | 20 | 20 | C | 20 | | 1)All three key indicators =3 Grade points/A<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade point/C<br>4)No Indicator=0/D |
| **IV - USE OF INFRASTRUCTURE & LEARNING RESOURCES** | | | | | | | | | |
| 13 | Physical facilities | Infrastructural facilities in the Department/Colleges<br>a. Use of Digital Classroom<br>b. Use of Virtual Classroom<br>c. Use of Labs d.Use of Library<br>e. Nlist usage<br>f. Maintenance of Departmental Library | Log books related to usage | 20 | 20 | A | 60 | | 1)Any four key indicators =3 Grade points/A<br>2)Any three key indicators =2 Grade points/B<br>3)Any two key indicators =1 Grade point/C<br>4) Below two indicators=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 |
|---|---|---|---|---|---|---|---|---|---|
| V- ROLE IN STUDENT SUPPORT AND PROGRESSION | | | | | | | | | |
| 14 | Student Support | 1. Counseling of students as Mentor/ Class teacher<br>a. Student Profile Collection b. Semester wise updation and maintenance<br>2. Any other Study Material /Guidance<br>a)Academic guidance for the advanced learner (offering supplimentary/reference books)<br>b)Handholding the slow learners (offering study material/ question banks)<br>3. Guiding/Monitoring Students for CSP/Internship<br>4. Organizing/Participation in Parent Teacher Meetings | Reports in the NAAC format | 20<br>10<br>10<br>10 | 50 | A | 150 | | 1)All Four key indicators =3 Grade points/A<br>2)Any Three key indicators =2 Grade points/B<br>3)Any Two key indicator =1 Grade point/C<br>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<br>10<br>10 | 30 | B | 60 | | 1)All three key indicators =3 Grade points/A<br>2)Any two key indicators =2 Grade points/B<br>3)Any one key indicator =1 Grade point/C<br>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<br>b)Participation in different institutional committees and preparation of committee reports<br>c)Participation in different institutional activities that focus on value based education<br>d)Contribution to IQAC/quality initiatives | Reports in the NAAC format | 4x10 | 40 | A | 120 | | 1)All Four key indicators =3 Grade points/A<br>2)Any Three key indicators =2 Grade points/B<br>3)Any Two key indicator =1 Grade point/C<br>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<br>2)Any one key indicator =2 Grade points/B<br>3)No Indicator=0/D |
| Total Grade points | | | | | 500 | | 1020 | | |

Name & Signature of the Principal

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

Name & Signatures of the Academic advisor

1)
2)
3)

# S.K.R.GOVERNMENT DEGREE COLLEGE (W)
# RAJAMAHENDRAVARAM-East Godavari Dist. (A.P.)

**Accredited at B+ Level by NAAC**

**AFFILIATED TO ADIKAVI NANNYA UNIVERSITY**

## A. General Information :

a) Name : Dr. M.Sunitha
b) Date of Birth : 03.06.1980
c) Residential Address : Krupadanam Heights, 47-4-3,
Gandhipuram-1
Rajamahendravaram-533103 (A.P.)
d) Designation : Lecturer and In-charge of the Department
e) Department : Chemistry
f) Area of Specialization : Applied chemistry
g) Date of Appointment :
h) i) In the Institution : 01/11/2003
ii) In the Present Post : 01/11/2003

## B. Academic Qualifications:

| Exam. Passed | Board/ University | Subject | Year | Division/ Grade Merit etc., |
|---|---|---|---|---|
| High School | Board of Secondary Education , AP | --- | 1995 | I |
| Higher Secondary or Pre-Degree | Board of Intermediate Education , AP | Bi.PC | 1997 | II |
| Bachelor's Degree | AndhraUniversity, Vizag | B.Sc. | 2000 | I |
| Master's Degree | AndhraUniversity, Vizag | M.Sc. | 2002 | I |
| Research Degree(s) | AndhraUniversity, Vizag | M.Phil | 2010 | |
| | AndhraUniversity, Vizag | Ph.D | 2017 | |

## C.Research Experience & Training :

| Research Stage | Title of Work/ Theses | University where the work was carried out |
|---|---|---|
| M. Phil or equivalent | Synthesis, Characterisation And Catalytic Study Of Spinal Copper Ferrite | Andhra University, Vizag |

| | | |
|---|---|---|
| Ph.D. | Visible Light Photo Catalytic Degradation Studies Of Selected Organic Dyes With AWO4 (A= Cu, Ba, Ni, Co) – GO Nano Composites | Andhra University, Vizag |
| Publications | 07 | |
| Training (Please Specify) | Orientation workshop on OER, E-content Development, MOOCS and MOODLE from 19/11/2018 to 24/11/2018 | E&ICT Academy, NIT Warangal |
| | Orientation programme | UGC Staff Academy, Vizag |
| | Three day training programme on LMS and Internship 6/2/2023 to 8/2/2023 | Arts College(Autonomous), Rajamahendravaram |
| | FDP on English Medium of Instruction 19/06/2023 to 24/06/2023 | Arts College(Autonomous), Rajamahendravaram |

## D.Teaching Experience:

| Courses Taught | Name of the University / College / Institution | Duration |
|---|---|---|
| U.G | S.K.R. Government Degree College (W), Rajamahendravaram | Since November 2003 till the date |
| Total Teaching Experience | Under Graduate | **20 years** |

| | |
|---|---|
| a.Teaching Methods | Blended-Lecture method, Discussion method. Bilingual |
| b.Laboratory Experiments | Demonstrative & hands onActivities |
| c. Evaluations Methods | summative evaluation, formative, evaluation, and diagnostic evalution |
| d.Preparation of Resource Material Laboratory Manuals | materials and laboratory Manuals were prepared for IBSc& III BSc |
| e.Remedial Teaching/ Student for Counselling (Academic) | 1)Taking Remedial classes slow learners 2) Also undertaking Students |
| F.Extension Work/ Community | Counselling in respect of theiracademic matter |
| G. Co-Curricular Activities | Always taking a leading role in the organization of Seminars, GDs, Debates, Quiz, Elocution, GuestLectures, Industrial Visits, Chemistry Club |
| Students Welfare and Discipline | Always taking genuine interest in the problems of the students. Supporting the students financially to pay college tuition fee.Students discipline is ensured byChecking their dress code, Punctuality, regularity to the Classes and whether the students are adhering to the colleges by-laws |

| Research Publications | | | | | |
|---|---|---|---|---|---|
| **S. No.** | **Name of the author/s** | **Title of the Paper** | **Name of the Journal** | **Year of Publication** | **ISBN /ISSN number** |
| 1 | Dr.M.Sunitha | Greener One-pot Synthesis of Chromeno Oxazin and Oxazin Quinoline Derivatives and their Antibacterial Activity | International Journal of Advanced Engineering Research and Science (IJAERS) | May-17 | ISSN: 2349-6495(P) \| 2456-1908(O) |
| 2 | | Catalyst Free One-Pot Synthesis of Chromeno Quinolines and Their Antibacterial Activity | Scientific Research Publishing Green and Sustainable Chemistry, | Jul-17 | ISSN Online: 2160-696X ISSN Print: 2160-6951 |
| 3 | | Visible Light Photocatalytic Degradation of Methylene Blue and Malachite Green Dyes with BaWO4-Go NanoComposite | International Journal of Environment, Agriculture and Biotechnology (IJEAB) | May-Jun-2017 | ISSN: 2456-1878 |
| 4 | | Synthesis, Characterization and Visible Light Photocatalytic Degradation Study ofThiourea modified Nano Titania Composites | Journal of Applicable Chemistry (International Peer Reviewed Journal) | July-2018 | ISSN: 2278-1862 |
| 5 | | Visible Light Photocatalytic Degradation of Methylene Blue and Malachite Green Dyes with CuWO 4 –GO Nano Composite | Scientific ResearchModern Research in Catalysis Publishing | July-2018 | 2168-4499 ISSN Print: 2168-4480 |
| 6 | | Heterostructure composite of fewo4 / chitosan via hydrothermal for degradation of brilliant green dye and inactivation of pathogens | International Journal of Multidisciplinary Advanced Research Trends | Vol. X, Issue 2(2) (September - 2022), | Print ISBN 2349-7408 |

# LIST OF PAPER PRESENTATIONS IN SEMINAR

| S.No. | Name of the seminar | Place &Date | Title of the Paper |
|---|---|---|---|
| 1 | National level seminar on Medicinal and Aromatic plants and value added products | S.K.R.College for Women, Rajahmundry, 9th &10th Jan. 2009 | Role of plants as antiseptics and disinfectants |
| 2 | National Seminar on Current Research Trends and Development inorganic Chemistry (CRTADIOS-2015) | Adikavi Nannayya University Campus, Rajahmundry 5th & 6th Oct. 2015 | Nano ferrite catalysed onepot synthesis of Quinoline derivativesunder micro wave irradiation |

| | | | |
|---|---|---|---|
| 3 | National Seminar on Recent Trends in science and Nano technology | M.R.COLLEGE Vizayanagaram | Nano Cobalt Ferrite Catalyzed One-Pot synthesis of poly hydro quinoline derivatives through multi component Hantzsch condensation. |
| 4 | National Seminar on Resent Trends in Chemical speciation, Kinetics and Nano Materials (RTCSKN-2017) | Department of inorganic & Analytical Chemistry, Andhra University, Visakhapatnam. 3rd&4th March,2017 | $CuFe_2O_4$ nano particles for three component one-pot synthesis of -amino carbonyl compounds through Mannich reaction. |

# TEACHING

Name of the Department : Dr. M. Savitha

Name of the Lecturer : chemistry

| Date / Month / Year | Day | Class | Period / Time | Medium EM / TM | Theory / Practical |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1/9/2022 | Thursday | I B.Sc | 2 | E.M | T |
| 2/9/2022 | Friday | | | | |
| 3/9/2022 | Saturday | | | | |
| 4/9/2022 | Sunday | | | | |
| 5/9/2022 | Monday | | | | |
| 6/9/2022 | Tuesday | | | | |
| 7/9/2022 to 9/9/2022 | Wednesday to Friday | | | | |
| 10/9/2022 | Second Saturday | | | | |
| 11/9/2022 | Sunday | | | | |
| 12/9/2022 | Monday | I B.Sc | 2 & 3 | E.M | P |
| | | I B.Sc | 4 | E.M | T |
| 13/9/2022 | Tuesday | | | | |

Signature of the Lecturer

Signature of the Department I/C

# DIARY 2021 - 2022

| Topic Covered | Methodology Adopted | No. of Students attended | Teaching Aids used | Student Activity conducted | Remarks |
|---|---|---|---|---|---|
| 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | |
| | | | | | |
| | | | | | |
| Academic Audit preparation | | | | | |
| Holiday but it is working | | | | | |
| Teachers day Celebrations | | | | | |
| | | 3. L. Madhavi ASD, GDC, LKd<br>4. Ch. Naga Rani GDC Kothapet | | 1. DD. L. Annamma Rao Kothapet<br>2. PS. L. Satyanarayana Kothapet<br>Academic Audit | |
| OD to conduct practical exams | | | | Govt Autonomous college PJY | |
| | " | | | | |
| Holiday | | | | | |
| Holy day | | | | | |
| Correction work. | | | | | |
| Revision. | | | | | |
| No class work | | | | | |

Signature of the Principal

# TEACHING

Name of the Department : Chemistry

Name of the Lecturer : Dr. M. Sunitha

| Date / Month / Year | Day | Class | Period / Time | Medium EM / TM | Theory / Practical |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 14/9/2022 | Wednesday | I B.Sc | 1, 2 & 3 | M.P.C E.M | Practical |
| 15/9/2022 | Thursday | I B.Sc | 2 | M.P.C | Theory |
| 16/9/2022 | Friday | | | | |
| 17/9/2022 | Saturday | | | | |
| 18/9/2022 | Sunday | | | | |
| 19/9/2022 | Monday | I B.Sc | 2 & 3 | ~~M.P.~~ E.M | practical |
| 20/9/2022 | Tuesday | | | | |
| 21/9/2022 | Wednesday | I B.Sc | 2 & 3 | M.P.C | practical |
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M. Sunitha
Signature of the Lecturer

Signature of the Department I/C

# DIARY 2021 - 2022

| Topic Covered | Methodology Adopted | No. of Students attended | Teaching Aids used | Student Activity conducted | Remarks |
|---|---|---|---|---|---|
| 7 | 8 | 9 | 10 | 11 | 12 |
| Record certification | | 45 | | | |
| Revision | | 60 | | | |
| | | | | World Ozone day Celebrate | |
| | | | | | |
| Holy day | | | | | |
| Record certification | | | | | |
| | | | | | |
| Record certification | | | | | |
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P.M PRINCIPAL
S.K.B. COLLEGE FOR WOMEN
NITHAKARINI SAMAJ
Signature of the Principal

**Commissionerate of Collegiate Education, Andhra Pradesh.**

**PROFORMA FOR TEACHING PLAN**

| | |
|---|---|
| Name of the Department | chemistry |
| Name of the Lecturer | Dr. M. Sunitha |
| Course / Group | cluster. |
| Paper | VIII $A_3$ |
| Name of the Topic | Visible / Near IR Spectroscopy |
| Hours required | 10 hrs |
| Learning Objectives | UV visible / Near IR - emission, absorption, fluorescence and photoaccoustic, Excitation sources, wavelength dispersion, Detection of signal, single and double beam instruments |
| Previous Knowledge to be reminded | Beer lambert's law |

Topic Synopsis

Beer - Lambert's law - The decrease in the intensity of incident radiation with thickness of the absorbing medium depends on the path length as well as the concentration of the solution.

In a single beam instrument, radiation from the monochromator or filter passes through either the reference cell or the sample cells before falling on the photo detector.

In a double beam instrument radiation from monochromator is split into two beams and simultaneously pass through reference and sample cells before falling on the photo detector. In the instrument the beam is alternately sent through reference and sample before falling on the photo detector.

Applications of U.V spectroscopy

1. Detection of functional groups
2. Extent of conjugation
3. Distinction between conjugated and non conjugated compounds.
4. Identification of an unknown compound
5. Identification of a compound in different solvents
6. Determination of configuration of Geometrical Isomers

Signal-to-noise Ratio :- The ability of the spectrometer to make accurate measurements depends on the quality of the signal obtained from the detector and the subsequent electrical circuits. It provides a measure of the signal quality.

Gratings :- A beam of white light incident on a grating will be separated into its component colours upon diffraction from the grating with each colour diffracted along a different direction. Dispersion is a measure of the separation between diffracted light of different wavelengths.

Photo Multiplier tubes :- These are useful for light detection of very weak signals is a photo emissive device in which the absorption of a photon results in the emission of an electron. It works by amplifying the electrons generated by a photocathode exposed to a photon flux.

PAS is the measurement of the effect of absorbed electromagnetic energy on matter by means of acoustic detection.

| | |
|---|---|
| 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 | |

H. Sudha

Signature of the Lecturer

Signature of the Department I/C

**Commissionerate of Collegiate Education, Andhra Pradesh.**

**PROFORMA FOR TEACHING PLAN**

| | |
|---|---|
| Name of the Department | Dept of chemistry |
| Name of the Lecturer | Dr. M. Sunitha. |
| Course / Group | B.Sc CBZ & MPC cluster |
| Paper | VIII A. |
| Name of the Topic | Separation Techniques. |
| Hours required | |
| Learning Objectives | |
| Previous Knowledge to be reminded | |

Topic Synopsis

Super critical fluid substances has properties intermediate between a liquid and a gas. It is a non-compressible high density fluid. The temperature and pressure are higher than critical temperature and
→ SFC is used in industry for separation of chiral molecule and also same columns as standard HPLC. but they have some technical issues.

Capillary electrophoresis is an analytical technique that separates ions based on their electrophoretic mobility with the use of an applied voltage.

CE is - Electrophoresis in buffer filled, narrow-bore capillaries. Each capillary is about 25-100 μm in internal diameter.

Applications of CE - capillary electrophoresis for the determination of the ions. in diagnostic and clinical sciences. used in genetic analysis. etc.

Hybrid techniques are a combination of two or more analytical techniques that help detect and quantify components in a mixture. GC-MS, LC-MS GC-IR & LC IR - are most popular analytical techniques. that are widely used in chemistry

Mass spectrometry analysers:- It measures mass to charge ratio of molecules and ions using electric and magnetic fields. There are several ionisation methods like electron impact, chemical ionisation, electronspray, fast atom bombardment, matrix assisted laser desorption ionisation and others.

Types of mass analysers:- That can be used for the separation of ions in a mass spectrometry.

1. quadrupole Mass analyser
2. Time of flight "
3. Magnetic sector "
4. electrostatic sector "
5. quadrupole ion trap "
6. ion cyclotron resonance "

Liquid chromatography:-

1. Ion exchange chromatography
2. super Fluid chromatography
3. capillary electrophoresis
4. HPLC etc.

| | |
|---|---|
| Examples / Illustrations | GC, LC |
| 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

PRINCIPAL
S.K.R. COLLEGE FOR WOMEN
RAJAMAHENDRAVARAM

Signature of the Head of the Department
Endowments Dept. Govt. of Andhra Pradesh

# ANNUAL CURRICULAR PLAN (CHEMISTRY DEPARTMENT) 2021-'22

S.K.R.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, 6. Smt.N.S.V.Sravani

| 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 alloted | Whether Conducted | If not alternate date | |
| MAY. | II | 6 | Alkanes & Cyclo Alkanes, Surface chemistry | | | | | | Power point presentation on Madam Curie by UG students | | | | |
| | IV | 4 | Organo metallic compounds | | | | | | | | | | |
| | | 4 | Coordination Chemistry | | | | | | | | | | |
| | VII | 9 | Unit-1Introduction, Chemical Toxicology | | | | | | | | | | |
| | VIII A1 | 4 | Introduction of Polymers | | | | | | | | | | |
| | A2 | 4 | Introduction to spectroscopic methods of analysis | | | | | | | | | | |
| | A3 | 3 | UNIT-I & IV | | | | | | | | | | |
| JUN. | II | 15 | Alkenes & Alkynes, Chemical Bonding, HSAB | | MID Exam-1 | | | | Inter collegiate quiz competitions | | | | |
| | IV | 15 | Carbohydrates, Aminoacids & Protiens | | Field Trip to ILTD, RJY | | | | | | | | |
| | | 15 | Inorganic reaction mechanism, Stability of metal complexes | | | | | | | | | | |
| | VII | 10 | Air pollution, eco system, concept and functions | | Guest Lecture on Spectroscopy | | | | | | | | |
| | VIII A1 | 10 | Polymers and their applications | | Field trip to Visakha Dairy | | | | WorkShop on Preparation | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A2 | 10 | Molecular Spectroscopy, Unit III Partly | | | | | | of House hold Chemicals | | | | | |
| | A3 | 10 | Unit-I,II&IV cont... | | | | | | | | | | | |
| JUL. | II | 15 | Stereochemistry of carbon compounds benzene and its reactivity | | | | | | | | | | | |
| | IV | 15 | Nitrogen containing functional groups, Heterocyclic compounds | | | | | | | | | | | |
| | | 15 | Phase rule ,Electro chemistry | | | | | | | | | | | |
| | VII | 11 | Water pollution, Ecology continued | | | | | | | | | | | |
| | VIII A1 | 10 | Unit-II-Techniques of Polymerization, Molecular Weights of Polymers & Unit-III partly | | | | | | | | | | | |
| | A2 | 10 | Unit-III cont. & Unit-IV Separation techniques | | | | | | | | | | | |
| | A3 | 11 | Unit-III & Unit-V | | | | | | | | | | | |
| AUG. | II | 12 | Revision | | MID Exam-2 | | | | | | | | | |
| | IV | 12 | Photo chemistry, thermodynamics | | Guest Lecture on Spectroscopy | | | | Guest Lecture on avenues for a chemistry under graduate | | | | | |
| | | 12 | Chemical kinetics | | | | | | | | | | | |
| | VII | 12 | Chemical toxicology, bio-diversity | | | | | | | | | | | |
| | VIII A1 | 11 | Unit-III continued & Unit-IV | | | | | | | | | | | |
| | A2 | 9 | Unit-V Elemental Analysis | | | | | | | | | | | |
| | A3 | 9 | Unit-III&V cont.. | | | | | | | | | | | |

PRINCIPAL
S.K.R. COLLEGE FOR WOMEN
HITHAKARINI SAMAJ
Endowment Dept, Govt of Andhra Pradesh

V B T Sunil
N.S.V.S.

| SKR GDC (W),RAJAMAHENDRAVARAM | | |
|---|---|---|
| **Department of Chemistry 2021-2022** | | |
| **Programme & Course outcomes** | | |
| | | Programme outcomes |
| | BSC-MPC& CBZ | 1. Understand the environment functions and how it is affected by human activities.<br>2. Acquire chemical knowledge to ensure sustainable use of the world's resources and ecosystems services.<br>3. Engage in simple and advanced analytical tools used to measure the different types of pollution.<br>4. Explain the energy crisis and different aspects of sustainability. 5.Gain the knowledge of chemistry through theory and practicals 6.identify chemical formula and solve numerical problems 7.understand good laboratory practices and safety<br>8. make aware and handle the sophisticated instruments or equipments |
| **SEM** | Name of the course | Course out comes |
| **sem-1** | Inorganic and Physical Chemistry | Understand the basic concepts of p-block elements<br>· Explain the difference between solid, liquid and gases in terms of intermolecular interactions.<br>· Apply the concepts of gas equations, pH and electrolytes while studying other chemistry courses. |
| **sem-2** | Organic & General Chemistry | Understand and explain the differential behavior of organic compounds based on fundamental<br>concepts learnt.<br>- Formulate the mechanism of organic reactions by recalling and correlating the fundamental<br>properties of the reactants involved<br>-Learn and identify many organic reaction mechanism including Free Radical Substitution,<br>-Electrophonic Addition and Electrophonic Aromatic Substitution. |

| | | |
|---|---|---|
| **Sem-3** | Organic chemistry & Spectroscopy | Understand preparation, properties and reactions of haloalkanes, haloarenes and oxygen<br>containing functional groups.<br>· Use the synthetic chemistry learnt in this course to do functional group transformations.<br>· To propose plausible mechanisms for any relevant reaction |
| **Sem-4** | Inorganic, Organic and Physical Chemistry | To learn about the laws of absorption of light energy by molecules and subsequent photochemical reactions.<br>· To understand the concept of quantum efficiency and mechanisms of photochemical reactions |
| **SEM-5** | Inorganic & Physical Chemistry | Understand concepts of boundary conditions and quantization, probability distribution, most<br>probable values, uncertainty and expectation values<br>· Application Of Quantization To Spectroscopy.<br>· Various types of spectra and their use in structure determination. |
| **SEM-6** | INORGANIC &PHYSICAL CHEMISTRY | Understand concepts<br>Of boundary conditions and quantization, probability distribution, most probable values, uncertainty and expectation values<br>2. Application of quantization to spectroscopy.<br>3. Various types of spectra and the irusein structure determination |

| | | |
|---|---|---|
| **cluster-A1** | Polymer chemistry | To understand the importance of the chemical approach to polymers and the subject provides an introduction to polymer science with respect to synthesis, polymerization kinetics and network formation/gelation of macromolecules formed by step-growth and chain-growth polymerization.<br>• To Study the, methods of measuring the molecular weight, polymerization kinetics and Copolymerization and polymer processing technologies.<br>• To understand about radical and ionic polymerization and techniques of polymer analysis<br>• To study mechanical properties and applications of polymers |
| **cluster-A2** | Instrumental methods of chemistry | To introduce the student to principles and theory of instrument analysis.<br>· To teach the student the correct operation of chemical instruments.<br>· To introduce the student to the techniques of troubleshooting instruments in the chemical laboratory.<br>· To emphasize the safe use of chemical instrumentation.<br>· To teach the student to solve problems related to the use of chemical instruments. |
| **cluster-A3** | Analysis of Drugs, Foods, Diary Products and Bio chemical analysis OUT COME SFOR 2021-22 | Students in this course will learn about microbes in food, spoilage of food and preservation techniques of food.<br>Milk and milk products:and nutritional importance of milk, processing of milk. |

# CERTIFICATE COURSE

## ON

## FOOD ADULTERATION

**.R.COLLEGE FOR WOMEN :: RAJAMAHENDRAVARAM**

**DEPARTMENT OF CHEMISTRY**

2021 -2022

From

Dr.M.Sunitha,
Lecturer in Chemistry,
S.K.R.College for Women,
Rajamahendravaram.

To

The Principal,
S.K.R.College for Women,
Rajamahendravaram.

**Sub:** Requesting letter to start a Certificate Course on "Food Adulteration" submitting Proposals regarding...

Respected madam,

We, the Department of Chemistry has planned to start Certificate Course for Final year B.Sc. students from 03/01/2022 to 28/02/2022 i.e., for 2 months (36 hrs.) on Food Adulteration for the academic year 2021-2022.

We humbly request you to permit us for conducting the above course.

Thanking you,

M. Sunitha
Dr.M.Sunitha

Dr. M. SUNITHA
M.Sc., M.Phil.,Ph.D.,
Incharge of the Dept. of Chemistry
S.K.R. COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM.

# S.K.R.COLLEGE FOR WOMEN:: RAJAMAHENDRAVARAM

## DEPARTMENT OF CHEMISTRY

## CERTIFICATE COURSE- 2021-22

The Department of Chemistry met in the Principal's chamber to discuss and review the conduct of the Certificate Course titled "**Food Adulteration**" under the chairman ship of the Principal and the faculty of the Department of Chemistry on 05.11.2021.

**RESOLUTIONS:**

(1) It is resolved to start the Certificate Course titled "**Food Adulteration**" from 03.01.2022 (36 hrs duration) for the academic year 2021-2022.

(2) Resolved to frame the syllabus, regulations for the successful completion of the certificate course titled "**Food Adulteration**".

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

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

(5) Qualifying mark is 40 %.

**MEMBERS PRESENT:**

1.Dr.Ch.V.V.Srinivas

2.Smt.V.B.T.Sundari

3.Smt.N.Swathi

4.Smt.P.N.L.Prasanna

5.Smt.N.S.V.Sravani

M. Sunitha

(Dr.M.Sunitha)
In charge of the Department

Dr.P.Raghava Kumari
Principal

Dr. M. SUNITHA
M.Sc., M.Phil., Ph.D.
Incharge of the Dept. of Chemistry
S.K.R. COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM

# CIRCULAR

DATE- 21.12.2021.

This is to inform that the Department of Chemistry is going to conduct a Certificate Course from 03.01.2022 to 28.02.2022 for III BSc students on **"Food Adulteration".** All the students are informed to enroll their names in the Department of Chemistry on or before 27.12.2021.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

Dr. M. SUNITHA
M.Sc., M.Phil.,Ph.D.
Incharge of the Dept.of Chemistry
S.K.R. COLLEGE FOR WOMEN,

# S.K.R.COLLEGE FOR WOMEN:: RAJAMAHENDRAVARAM

## DEPARTMENT OF CHEMISTRY

### CERTIFICATE COURSE- 2021-22

# REPORT

As a part of academic activity, the Department of Chemistry has conducted Certificate Course in 'Food Adulteration' from 03.01.2022 to 28.02.2022 for the academic year 2021-2022. The important objective of the course is to improve basic knowledge on Food Adulteration and its consequences.

Classes were taken by the Chemistry faculty member for 36 hrs. At the end of the course, an external examination with multiple choice questions has conducted for the assessment of learner's understanding levels of knowledge. The minimum qualifying mark for awarding the certificate is 40%. 23 students completed the course successfully and got certificates during the academic year 2021-2022.

M. Seetha

Head of the Dept. of Chemistry
S.K.R. COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM

# S.K.R.COLLEGE FOR WOMEN :: RAJAMAHENDRAVARAM

## DEPARTMENT OF CHEMISTRY

## CERTIFICATE COURSE- 2021-22

### LIST OF STUDENTS ENROLLED

### "FOOD ADULTERATION"

| S.No. | Name of the student | Class | Hall ticket number |
|---|---|---|---|
| 1. | B Jahnavi Devi | III BSC MPC | 190907101005 |
| 2. | J Bhavani | III BSC MPC | 190907101007 |
| 3. | J SatyaPrasanthi | III BSC MPC | 190907101009 |
| 4. | K B havani | III BSC MPC | 190907101012 |
| 5. | K Veeraveni | III BSC MPC | 190907101013 |
| 6. | L Lakshmi Priya | III BSC MPC | 190907101016 |
| 7. | K Bhavani | III BSC MPC | 190907101017 |
| 8. | L Adi Lakshmi | III BSC MPC | 190907101020 |
| 9. | M Madhuri | III BSC MPC | 190907101021 |
| 10. | M Hemalatha | III BSC MPC | 190907101026 |
| 11. | M Navya | III BSC MPC | 190907101027 |
| 12. | S DurgaAvanthi | III BSC MPC | 190907101028 |
| 13. | SVPK Sri Brundan | III BSC MPC | 190907101029 |
| 14. | T Surekha | III BSC MPC | 190907101030 |
| 15. | U Hema Sri | III BSC MPC | 190907101032 |
| 16. | V RatnaKumari | III BSC MPC | 190907101033 |
| 17 | K Sandhya | III BSC MPC | 190907110145 |
| 18. | M DivyaKanthi | III BSC CBZ | 190907110157 |
| 19. | P Sowjanya | III BSC CBZ | 190907110169 |
| 20. | P Sushma | III BSC CBZ | 190907110172 |
| 21. | P Srivalli | III BSC CBZ | 190907110174 |
| 22. | S Deepika | III BSC CBZ | 190907110180 |
| 23. | G sandhya Rani | III BSC CBZ | 190907110181 |

Smt.KANDUKURI RAJYALAKSHMI COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM,
RE-ACCREDITED AT B+ LEVEL BY NAAC

# Certificate

This is to certify that_____ of III B.Sc succesfully completed the Value Added Course on **Food Adulteration** conducted by the Department of Chemistry from 03-01-2022 to 28-02-2022.

Head of the Department

Dr. M. SUNITHA
M.Sc., M.Phil., Ph.D.
Head of the Department of Chemistry
S.K.R. COLLEGE FOR WOMEN,
RAJAMAHENDRAVARAM

Principal

# C O L L O I D S

**Q... What are Lyophilic Colloidal Solutions ?**

These are liquid loving colloids. Those colloidal solutions, in which the dispersion phase shows affinity towards the dispersion medium, are called Lyophilic Colloidal Solutions.

Ex :- Starch Solution.

In the Lyophilic Colloidal Solutions, if the dispersion medium is water, the resultant colloidal solutions are known as Hydrophilic Colloidal solutions.

Lyophilic Colloids are reversible and stable.

**Q... What are Lyophobic Colloidal Solutions ?**

These are liquid hating colloids. Those colloidal solutions, in which dispersion phase does not show any affinity towards dispersion medium, are called Lyophobic Colloidal Solutions.

Ex :- Gold Solution.

In the Lyophobic Colloidal Solutions, If the dispersion medium is water, the resultant colloidal solutions are known as Hydrophobic Colloidal Solutions. These are irreversible and unstable.

**Q... Write the Differences between Lyophilic and Lyophobic Colloidal Solutions.**

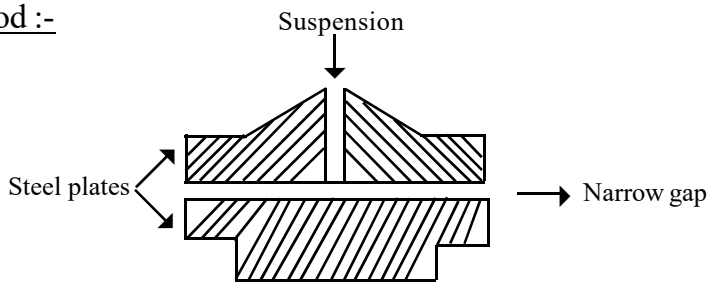
| Lyophilic Colloidal Solutions | Lyophobic Colloidal Solutions |
|---|---|
| 1. These can be prepared by direct mixing of dispersion phase and dispersion medium | 1. These can not be prepared by direct mixing of dispersion phase and dispersion medium. These are prepared in Colloidal mills. |
| 2. These are stable | 2. These are unstable |
| 3. These are reversible | 3. These are irreversible |
| 4. The particles present in the Lyophilic Colloidal solutions are chargeless or may possess little charge. | 4. The particles in the Lyophobic Colloids are charged. |
| 5. These Colloids need larger amount of electrolyte for coagulation. | 5. These Colloids need less amount of electrolyte for coagulation. |
| 6. These may or may not show electrical properties. | 6. These show electrical properties. |

**Q... How are Colloids Prepared ?**

Colloids can be prepared by the following methods. They are

a) Mechanical Method b) Bredig-Arc Method c) Peptisation Method

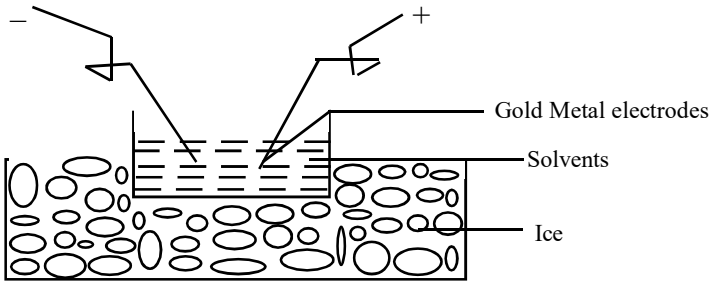
Mechanical Method :-



Colloidal mills are used in this method. The mill consists of two steel plates with a narrow gap between them. These plates rotate in opposite directions by using a belt.

In this method, first the substance is powdered and mixed with the dispersion medium to get suspension. This suspension is fed into the narrow gap between the steel plates. The particles present in the suspension are cut to size of the colloidal particles by the rotation of steel plates. Thus, colloidal solutions are prepared in this method.

Bredig-Arc method :-



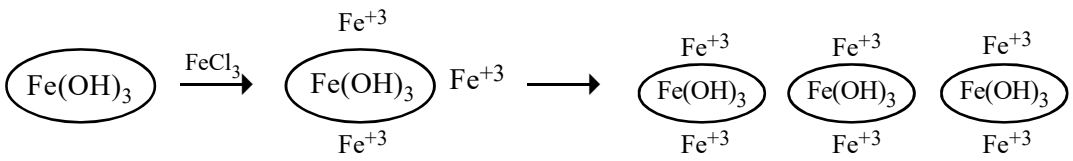

In this method, metal sols are prepared. The metal rod whose colloidal solution is to be prepared is kept in the vessel containing the solvent. This vessel is kept in the outer tank containing ice. When an electric arc is generated, the metal rods directly goes into the vapour state and condense in the solvent giving colloidal size particles. Thus metal sols are prepared.

Peptisation method :-

The conversion of a precipitate into colloidal size particles by the addition of an electrolyte having a common ion is known as Peptisation. The electrolyte used for this purpose is known as Peptising agent.

When the electrolyte is added to freshly prepared precipitate, the precipitate adsorbs common ion present in the electrolyte on its surface. Due to adsorption of ions of same charge, repulsions develop between the ions present on the surface of the precipitate. As a result, the precipitate is disturbed and gives colloidal size particles. In this way, colloidal solutions are prepared in this method.

Ex :- Ferric hydroxide colloidal solution is prepared by adding ferric chloride to the ferric hydroxide precipitate. In this preparation, $FeCl_3$ is used as Peptising agent.




**Q... How are Colloids Purified?**

In the preparation of colloidal solutions, excess amount of electrolyte may be used. This excess amount of electrolyte may act as an impurity in the colloidal solution. These impurities are removed by the following methods.

a) Dialysis b) Ultrafiltration c) Ultra centrifugation

Dialysis :-

Dialysis is a technique used for the purification of colloids. The membrane used for this method is known as "Dialyser."

The principle involved in this technique is "impurities can pass through parchment paper bag where as colloidal particles cannot."

In this technique, the colloidal solution which is to be purified is kept in a parchment paper bag. It is suspended in a tank containing circulating water. After this arrangement is made, the impurities diffuse through parachment paper bag leaving colloidal particles in the bag. If the impurity in the colloidal solution is an electrolyte. The process is accelerated by the application of electric field. Under the influence of electric field, the ions present in the electrolyte migrate to oppositly charged electrodes placed outside the bag. This process is known as "Electrodialysis."

Ultra filtration :-

In this process, ultra filter papers are used. These papers are prepared by soaking ordinary filter paper in the gelatin solution and hardening by formaldehyde solution. The following arrangement is made with this ultra filter paper.

The impure colloid is kept in the vessel fixed with a piston. Then, pressure is applied on the impure colloidal solution, the impurities present in the impure colloid diffuse through the ultra filter paper, leaving pure colloidal solution in the vessel.

Ultra Centrifugation :-

In this method, colloids are purified by gravitational technique.

**Q... Discuss about the Properties of Colloids.**

Colloids show the following Properties.

a) Tyndal Effect (optical property) :-

The scattering of light by the colloidal particles is known as Tyndal effect.

When a beam of light is passed through a true solution, it can not be seen unless the eye is kept in the direction of the path. But, when the same beam of light is passed through the colloidal solution, it appears as a bright streak. This phenomenon is called tyndal effect and the streak of light is known as tyndal cone. Tyndal effect is due to the scattering of light by the colloidal particles.

Reasons for the Tyndal effect :-

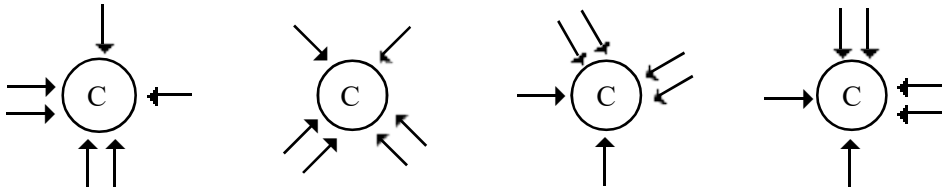
a) The colloidal partcles have enough surface to scatter the light.

b) The diameter of the colloidal particle is more than the wavelength of the light used.

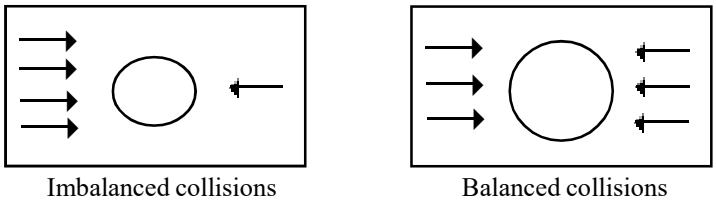
b) The difference between the refractive index of dispersion phase and dispersion medium is high.

b) Brownian movement (Kinetic property) :-

Continuous, rapid, zig-zag motion of the colloidal particles in the colloidal solution is known as Brownian movement. Robert Brown observed the constant motion of the pollen grains in the aqeous solution. This phenomenon is known as Brownian movement. Similarly, when colloidal solutions are observed, continuous, rapid and zig-zag motion of the colloidal particles in all the directions are found. This movement is called Brownian movement.




Brownian movement is due to the imbalanced collisions made by the molecules of the dispersion medium on the colloidal particles. As a result, the colloidal particles acquire kinetic energy so that, the colloidal particles move randomly in the solution. As the size of the colloidal particle increases, the brownian movement decreases because imbalanced collisions become balanced collisions. That is why, brownian movement is not observed in the suspension.



Imbalanced collisions Balanced collisions

c) Electrophoresis (electrical property) :-

The migration of the colloidal particles towards one of the two electrodes under the strong electric field is known as Electrophoresis.

In this process, a 'U' type tube is taken. It is partly filled with a colloidal solution. It is covered with water. The vessel is fitted with two platinum rods. One acts as cathode and the other acts as anode. The level of the colloidal solution is noted. When the electrical field is applied, the collidal particles move towards one of the two electrodes. This type of movement of colloidal particles under the strong electric field is known as "Electrophoresis."

The migration of the colloidal particles towards one of the electrodes depends upon the charge on the colloidal particles. Negatively charged particles migrate towards anode. It is indicated by the rise in the level of the colloidal solution in the limb containing platinium anode. Positively charged colloidal particles migrate towards cathods. This is indicated by the rise in the level of the colloidal solution in the limb containing platium cathode.

d) Electrosmosis (Electrical property) :-

The migration of dispersion medium towards one of the electrodes under the strong electric field is known as "Electrosmosis."

In this process, a 'U' type tube is taken. It is fixed with two membranes, M and M`. The colloidal solution is kept between the membranes. The remaining portion of the vessel is fitted with water. The vessel is fitted with two platinum electrodes. One acts as cathode and the other acts as anode. The original level of the solution in the limbs are noted. When strong electric field is applied, the level of the solution in one of the limbs is rised due to migration of dispersion medium towards one of the electrodes. This type of migration of dispersion medium of the colloidal solutions towards one of the electrodes under the strong electric field is known as Electrosmosis.

e) Coagulation (or) Flocculation :-

The conversion of colloidal state into suspension state is known as Coagulation Or Flocculation.

The colloidal particles present in the solution are charged. When an electrolyte is added to the colloidal solution, the colloidal particles present in the solution, attract oppositely charged ions of the electrolyte. As a result, the charge present on the colloidal particles is neutralised. Hence, the colloidal paticles come closer and form precipitate. This phenomenon is known as "Coagulation."

Ex :- Ferric hydroxide colloidal solution is coagulated by the addition of aluminium sulphate. The sulphate ions of the aluminium sulphate neutralise the positively charged ferric hydroxide particles. As a result, coagulation takes place.

The ion which coagulate the colloidal solution is known as Flocculation ion. According to Hardy-Schulge rules, the higher the charge of the flocculating ion, the higher is its flocculating power.

For example, $Al^{+3} > Mg^{+2} > Na^{+}$

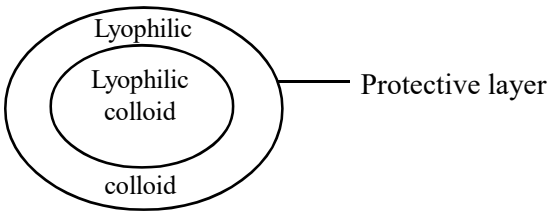
$[Fe(CN)_6]^{-4} > PO_4^{-3} > SO_4^{-2} > Cl^{-}$

The minimum amount of electrolyte which is to be added to the colloidal solution for causing coagulation is known as Flocculation value. It is expressed in milli moles/lit.

Protection of Colloids :-

The prevention of coagualtion in the Lyophobic colloids by the addition of a lyophilic colloids is known as protection of colloids.

Lyophilic colloids are stable and resistant to the formation of precipitate, when an electrolyte is added. Unlike lyophilic colloids, lyophobic colloids are unstable and coagulate on addition of an electrolyte. If a lyophilic colloid is added to the lyophobic colloid, lyophobic colloids does not form precipitate on addition of an electrolyte. This is known as protection of colloids. Lyophilic colloids by forming a protective layer around the lyophobic colloids prevent coagulation in the lyophobic colloid when an electrolyte is added.




Lyophilic colloids used for such pupose are known as Protective Colloids.

Ex :- Gold sol is precipated by the addition of NaCl electrolyte, If gelatin is added to gold sol before the addition of NaCl, precipitate is not formed. Therefore, gelatin is a protective colloid

**Q... Define Gold number.**

Lyophobic colloids are unstable. They give precipitate on addition of an electrolyte. If a lyophilic colloid is added to the lyophobic colloid, the formation of precipitate is prevented. Lyophilic colloids used for such purposes are known as Protective Colloids. The protecting power of all lyophilic colloids is not the same.

The protecting power of lyophilic colloids is measured in "Gold number". It is defined as "the weight in milligrams of a protective colloid which prevent the coagulation in 10 ml.of Gold sol by the addition of 1 ml of 10 % NaCl solution." Smaller the Gold number for a colloid, greater is its protecting power.

The gold number of Gelatin is 0.005 - 0.01 mg.

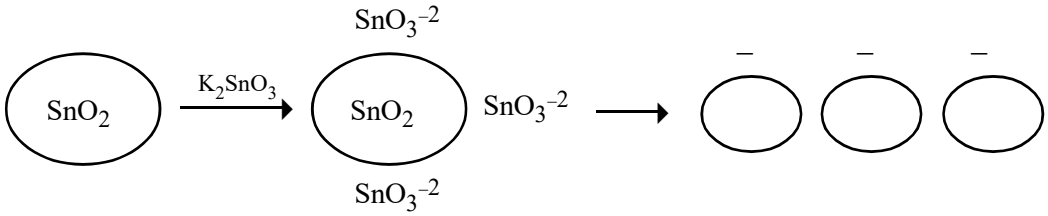
**Q... Explain the Origin of charge on colloids.**

The colloidal particles are charged i.e, they possess either positive or negative charge. The origin of charge on colloidal particles is due to preferential adsorption of either positive or negative charged ions on the surface of the colloidal particles.

Ex :- $Fe(OH)_3$ colloidal solution is prepared by peptisation with $FeCl_3$. The colloidal particles of $Fe(OH)_3$ colloidal solution carries positive charge due to preferential adsorption of $Fe^{+3}$ ions of $FeCl_3$ on the surface. Similarly, colloid particles of $As_2S_3$ solution possess negative charge due to preferential adsorption of sulphide ($S^{-2}$) ions of $H_2S$ on the surface of $As_2S_3$ particles.

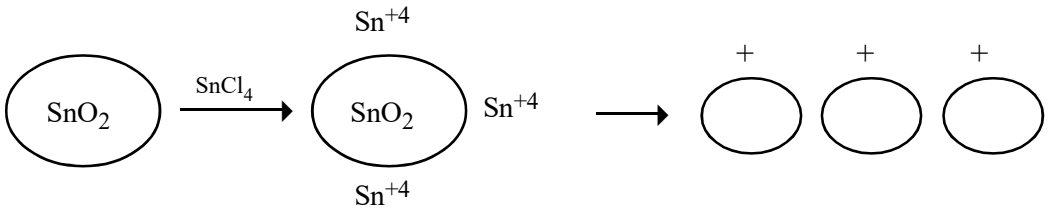
The particles of the colloidal solution, formed by the peptisation of stannic oxide ($SnO_2$) with KOH, carries negative charge due to preferential adsorption of $SnO_3^{-2}$ ions formed by the reaction between KOH with a small amount of $SnO_2$.

$$KOH + SnO_2 \longrightarrow K_2SnO_3$$




The particles of the colloidal solution, formed by the peptisation of $SnO_2$ with HCl, carries positive charge due to preferential adsorption of $Sn^{+4}$ ions formed by the reaction between HCl and a small amount of $SnO_2$.

$$SnO_2 + 4HCl \longrightarrow SnCl_4 + 2H_2O$$




**Q... What are Emulsions ? How emulsfying agent stabilise the emulsion.**

Emulsions are the colloidal solutions formed by the liquid dispersion phase and liquid dispersion medium.

Ex :- 1) Milk is an emulsion made of water and liquid fat.

2) Cod liver oil is an emulsion made of water and oil.

<u>Emulsions are of two types :-</u>

a) Oil in water type (o/w) b) Water in oil type (w/o)

Oil in water type emulsions :-

In these type of emulsions, oil is dispersion phase and water is dispersion medium.
Ex :- Milk, Vanishing cream etc.,

Water in oil type emulsions :-

In these type emulsions, water is dispersion phase and oil is dispersion medium
Ex :- Butter, Cold cream etc.,

The two types of emulsions can be distinguished by following methods.

a) Dye method :-

In this method, a small amount of dye, which is soluble in oil, is added to the emulsion. If the emulsion is water in oil type, then the emulsion take up the colour of the dye and appear as a coloured solution. If the emulsion is oil in water, the solution remains in its orginal colour.

b) Conductivity :-

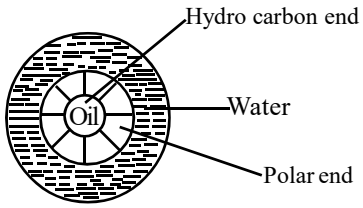
The electrical conductivity of oil in water emulsion is higher than that of water in oil emulsion. Basing on this concept the types of emulsion are identified.

Emulsifiers or Emulsfying agents :-

An emulsion is made of two immiscible liquids. Hence, it is stable for a short period. On long standing the two liquids get seperated. In order to get stable emulsions, it is necessary to add another substance. This substance is known as "Emulsifier or Emulsfying agent."
Ex :- Water and Kerosene form a stable emulsion by the addition of soap solution. Here, soap is an emulsifier.

The emulsifier consists of a polar group and a hydrocarbon group at its chain ends. The polar end dissolves only in water and hydrocarbon end dissolves only in oil.

Emulsifier, by dissolving its polar end in water and hydrocarbon end in oil reduces interfacial tensions between the two immiscible liquids and facilitates easy mixing of two immiscible liquids.



**Q... What is Zeta Potential ?**

The difference in the potential between a fixed layer and a mobile layer at the site of the colloidal particle is known as "Zeta Potential."

During the peptisation process, an electrolyte is added to the precipitate. The precipitate adsorbs one of the ions and form a double layer. The double layer consists of two layers. They are fixed layer and mobile layer.

Fixed layer :-

This layer is fixed on the surface of the solid. It consists of either +ve or -ve ions.

Mobile layer :-

This is also called diffused layer. This is diffused in the dispersion medium. It consists of both +ve and -ve ions. But the net charge on both layers is zero.

The existance of oppositely charged ions in the fixed and diffused layers of double layer generates a potential difference between two layers. This potential difference is known as Zeta Potential.

Ex :- When stannic oxide ($SnO_2$) is peptised with KOH fixed layer is formed with stannate ions and mobile layer is formed with both potassium and stannate ions.

**Q... Explain Donnan membrane equilibrium state**

When two electrolytes having a common ion are seperated by a membrane, which is impermeable to one of the ions, the other ions diffuse across the membrane till an equilibrium state is established. At equilibrium state, though the concentrations of the diffusable ions vary on each side of the membrane, the product of the concentration of these ions is same on both sides of the membrane. This type of equilibrium state is known as "Donnan membrane equilibrium state."

Ex :- When Sodium chloride solutions of different concentrations are seperated by a membrane, which is permeable to all the ions, the ions diffuse through the membrane from one side to another side till an equilibrium state is established. At the equilibrium state, the concentrations of the diffusable ions ($Na^+$, $Cl^-$, etc.,) become same on both sides of the membrane.

Similarly, if Sodium chloride solution and sodium palmitate solution are seperated by a membrane which is impermeable to palmitate ions, the diffusable ions diffuse through the membrane till an equilibrium state is established. At the equilibrium state, though the concentrations of diffusable ions are different on either side of the membrane, the product of the concentrations ions of the diffusable ions on both sides is same.

Consequences of Donnan membrane equilibrium state :-

a) Red blood cells contain 1% NaCl due to Donnan membrane equilibrium state.

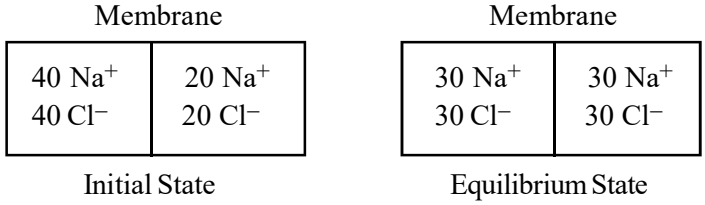
b) Donnan membrane equilibrium is the basis of dialysis

c) Due to this equilibrium, the osmotic pressures of the solutions on both sides of the membrane is different.

**Q... Discuss the Applications of Colloids.**

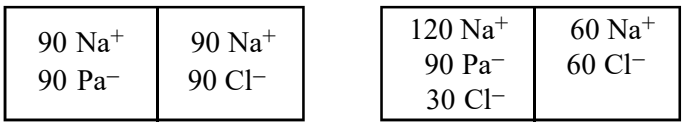
i) Purification of sewage water :-

Sewage water consists of colloidal size dust particles. These particles carry electric charge. Therefore, do not settle down easily. These particles are removed from the sewage water by the process of cataphoresis. In this process, sewage water is passed through a tunnel fitted with metallic electrodes maintained at high potential difference, when the current is applied, the dust particles migrate towards oppositely charged electrodes leaving pure water.




ii) Purification of Smoke :-

In the smoke, colloidal size carbon particles are dispersed. These particles are charged. These particles are removed from smoke by means of electrophoresis. In this process, smoke is passed through metal electrodes maintained at high potential difference. When the current is applied, the dust particles migrate towards charged electrodes, leaving pure air.




iii) Clotting of Blood :-

Blood is a colloidal solution. Due to colloidal nature of the blood, bleeding is stopped by applying $FeCl_3$ solution to the wound. $FeCl_3$ solution cause coagulation in the blood. Hence, bleeding is stopped.

iv) Purification of Water :-

It is done by coagulation. Impure water contains colloidal size clay particles. These can be removed by the addition of alum. The $Al^{+3}$ ions present in the alum coagulate colloidal size particles. So that, clay particles along with dust settle down at the bottom leaving the water in clean state.

v) Formation of delta :-

When the river water, containing charged clay and sand particles, meet the sea water containing NaCl and other salts. The charged clay and sand particles loss their charge and accumulate at the point of contact. As a result, delta is formed at the mouth of sea.

## 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

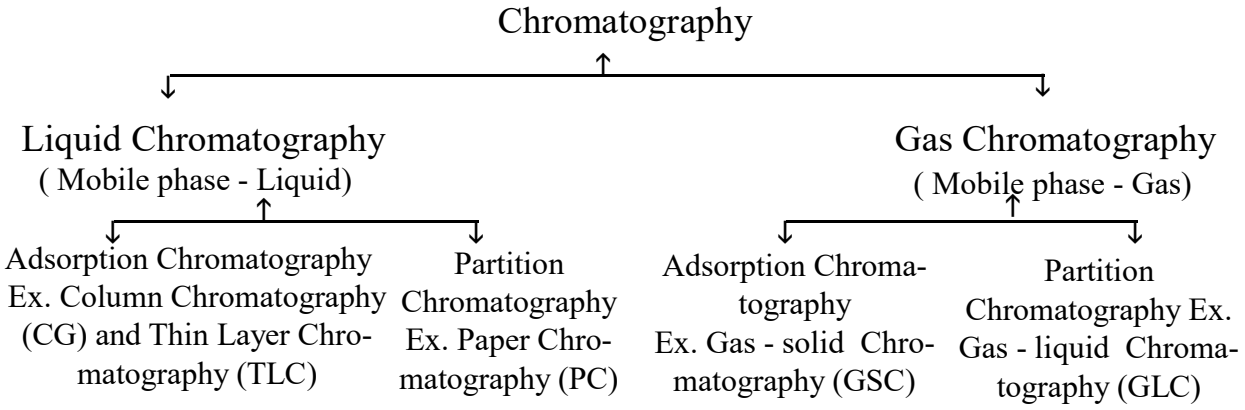
(1). Adsorption of compounds on the stationary phase (2). Desorption of compounds from the stationary phase by the mobile phase.

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.

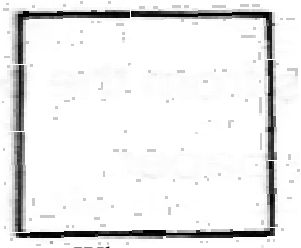
**PRINCIPLE**:- It is based on the distribution law. It is based on the principle that compounds with different distribution coefficients between the stationary phase and mobile phase will move different speeds on the stationary phase along with mobile phase. Hence, they canbe easily seperated.

**Experimental Procedure**:-

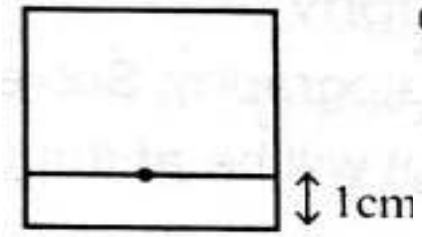
Stationary Phase:- Water present in the whatmann paper

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

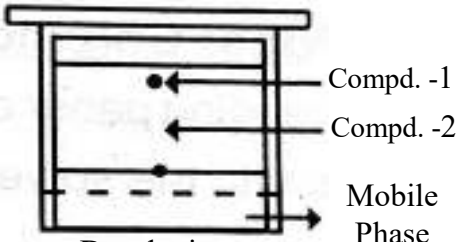
In this technique the sample containing compounds is spotted on the filter paper just above 1 cm. from the bottom. The paper is kept in the chromatography chamber containing organic solvent. The solvent rises by the capillary action and moves upwards on the paper. It pushes the compounds in the sample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



Whatmann paper

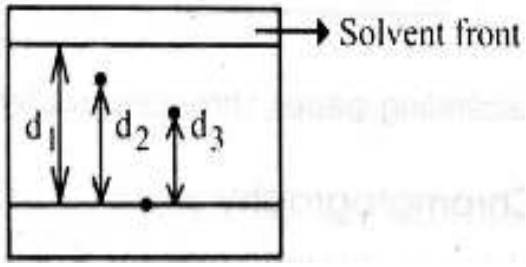



Spotting of paper




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

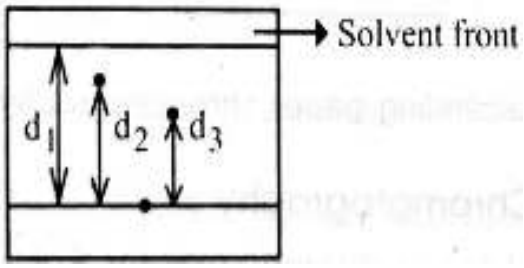
$$\text{Rf value of a compound} = \frac{\text{Distance travelled by the compound on the paper}}{\text{Distance travelled by the solvent front on paper}}$$

**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



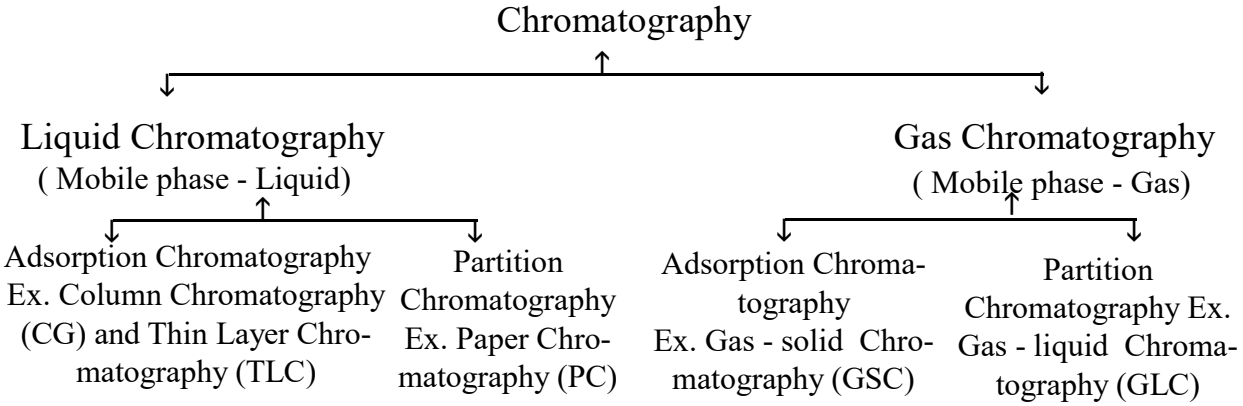
Development of Paper

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

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.

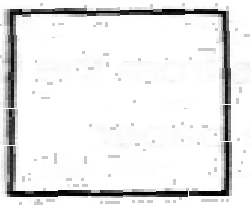
**Experimental Procedure**:-

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

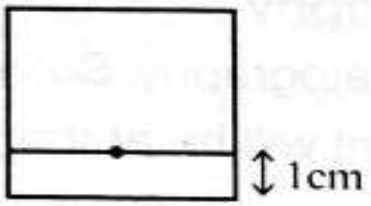
**Mobile Phase**:- n-hexane, Benzene, Chloroform, Methyl hexane etc.,

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.

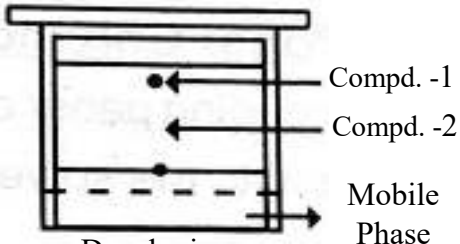
The solvent moves up the plate through the stationary phase by the capillary action. The solvent pushes the compounds in the sample moves up with the solvent with different speeds and get adsorbed at different places basing on their polarity as bright spots. After the solvent front is reached, the TLC 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:-

.

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

**********

*

**"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 cum 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 2021–2022

**********

| Date | Time/ Hour | Topic | Content/Activity | Resource Person |
|---|---|---|---|---|
| 13/12/21 | 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 |
| 16/12/21 | 2nd | 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 |
| 17/12/21 | 4th | Fundamentals of Organic Reaction Mechanism | 1. stability of Carbocation, Carbanion, and Carbon free radical<br>2. Types of Reagents- Electrophiles and Nucleophiles<br>3.Curved arrow notations, cleavage of bond-homolytic and heterolytic cleavage<br>4. Resonance effect, Inductive effect, Mesomeric effect and Steric effect<br>5.Types of reactions- Addition, Elimination, Substitution, and Rearrangement | Smt.V.B.T.Sundari |
| 18/12/21 | 1st | Structure of Atom | i) Principal quantum number<br>ii) Azimuthal quantum number<br>iii) Magnetic quantum number<br>iv) Spin quantum number,<br>Shape of orbitals - a) s – orbital b) p – orbital c) d – orbital<br>a) Aufbau principle<br>b) Pauli's exclusion principle<br>c) Hund's rule | Dr.M.Sunitha |

S.K.R.COLLEGE FOR WOMEN, RAJAHMUNDRY

DEPARTMENT OF CHEMISTRY

REMEDIAL COACHING

Name of the Lecturer: Dr. M. Suntha, V. B.T Sundari  Semester- I

Class I Bsc  Year-2021-22

| S.NO | Name of the Student | Marks obtained in the previous semester Mid | TOPIC COVERED | | | | | Marks obtained in the internal exam after remedial coaching | Signature of the student | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Dt | Dt | Dt | Dt | Dt | | | |
| 1. | B.N.S Kavita Mahalakshmi | 13 | ✓ | ✓ | ✓ | ✓ | ✓ | 15 | | |
| 2. | Ch. Mounika | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | 14 | Ch. mounika | |
| 3. | K. Uma Meghana | 10 | Ab | ✓ | Ab | ✓ | ✓ | 15 | K. uma meghana | |
| 4. | K. Syamala | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | 12 | K. Syamala | |
| 5. | L. Jaya priya | 11 | ✓ | ✓ | Ab | ✓ | ✓ | 15 | L. Jaya priya. | |
| 6. | J. Hema Latha Reddy | 09 | ✓ | ✓ | ✓ | ✓ | ✓ | 15 | J. Hemalatha Reddy | |
| 7. | P. Pavathi | 10 | ✓ | ✓ | ✓ | ✓ | Ab | 15 | P. Pavathi | |
| 8. | S. Iswarya | 14 | ✓ | ✓ | ✓ | ✓ | ✓ | 15 | S. Iswarya. | |
| 9. | D. Gandhyalani | 10 | ✓ | Ab | ✓ | ✓ | ✓ | 10 | D. Gandhyalani | |

M. Suntha

V.B.T Sundari

## Remedial Classes Tests - 2021 - 2022 (Odd Sem)

| S.No | Name of the Student | Class | 18/4/22 | 19/4/22 | 21/4/22 | 22/4/22 | 25/4/22 | |
|---|---|---|---|---|---|---|---|---|
| 1. | B. N. S Kanaka Lakshmi | I BSc | 13 | 12 | 11 | 13 | 13 | 13 | 12 |
| 2. | Ch. Homika | | 10 | 10 | 11 | 13 | 12 | 13 | 12 |
| 3. | K. Uma Meghana | | 10 | 10 | 12 | 12 | 13 | 13 | 13 |
| 4. | K. Syamala | | 10 | 10 | 09 | 13 | 13 | 14 | 13 |
| 5. | L. Teja priya | | 11 | 10 | 11 | 10 | 11 | 12 | 11 |
| 6 | J. Hema Latha Reddy | | 09 | 08 | 09 | 11 | 12 | 12 | 11 |
| 7. | P. Ravathi | | 10 | 09 | 08 | 10 | 12 | 13 | 13 |
| 8. | S. Iswarya | | 14 | 14 | 13 | 12 | 11 | 10 | 14 |
| 9. | D. Chandhiya Rani | | 10 | 11 | 12 | 12 | 11 | 13 | 13 |

Sem-II

1.

**SMT.KANDUKURI RAJYALAKSHMI COLLEGE FOR WOMEN,RAJAMAHENDRAVARAM**

**Re-Accredited at B+ Grade by NAAC**

**Affiliated to Adikavi Nannaya university**

**DEPARTMENT OF CHEMISTRY**

**ACTION PLAN FOR THE YEAR 2020-2021**

| S.No | Month/Year | Proposed Activities | Remarks |
|---|---|---|---|
| 1 | October-2021<br>I Week | --- | |
| | II Week | --- | |
| | III Week | Departmental staff meeting to review results and class work allotment/ Preparation of annual Action Plan | |
| | IV Week | Preparation of Curriculum plan and timetables for even semester | |
| 2 | November-2021<br>I Week | Rajyalakshmamma Birth Anniversary / celebrations | |
| | II Week | I Midterm examinations<br>III Year students | |
| | III Week | Preparation of e- content | |
| | IV Week | Assignments | |
| 3 | December-2021<br>I Week | Orientation program for<br>I BSC Students | |
| | II Week | bridge course for I Year students | |
| | III Week | I Midterm examinations for<br>II & I Year students<br>II Midterm examinations for III Year students | |
| | IV Week | Medicinal garden development | |
| 4 | January-2022<br>I Week | Field visit for final year students | Visited Rubber processing unit |
| | II Week | Sankranti Sambaralu | |
| | III Week | student seminars | |
| | IV Week | | |
| 5 | February-2022<br>I Week | Conduct of Quiz on "World Cancer day" | |
| | II Week | II Midterm examinations for II & I Year students | |
| | III Week | Remedial Coaching classes | |
| | IV Week | National Science day | |
| 6 | March-2022<br>I Week | WorkShop | **Done on** |

| | | | |
|---|---|---|---|
| | II Week | International Womens day | |
| | III Week | Preparation of curricular plans for even sem | |
| | IV Week | I Mid examinations for III Year students<br>Guest Lecture | |
| **7** | April - 2022<br>I Week | Group Discussion | |
| | II Week | I Midterm examinations for I &II Year students | Mid exam conducted in June for I Year |
| | III Week | Birth anniversary of Sri Rao Bahadur Kandukuri Viresalingam pantulugaru | |
| | IV Week | II Midterm examinations for III Year students | |
| **8** | May - 2022<br>I Week | | |
| | II Week | Conduct of student seminars | |
| | III Week | II Mid examinations for I & II Year students | Mid exam conducted in July for I Year |
| | IV Week | Kandukuri veeresalingam gari vardanthi | Done |
| **9** | June - 2022<br>I Week | World Environmental day | |
| | II Week | I Midterm examinations for I Year | |
| | III Week | Remedial Coaching | |
| | IV Week | Conduct of study hours / | |
| **10** | **July - 2022<br>I Week** | **II Midterm examinations for III Year students** | |
| | **II Week** | | |
| | **III Week** | II Midterm examinations for II & I Year | |
| | **IV Week** | | |
| **11** | August - 2022<br>I Week | | |
| | **II** Week | **Independence day** | One week activities - Azadika Amruth Mahotsav |
| | III Week | Departmental feedback/ Institutional feedback. | |
| | IV Week | | |

# MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is drawn up on **21 -08 -2017**

Between

**Dr. Major B. Kalyani**, In-charge of Department of Commerce, S.K.R. College for Women, Rajamahendravaram hereinafter referred to as Party-1.

And

**Smt. K. Sailaja ,** In-charge Principal, Godavari Institute of Fashion Technology, Rajamahendravaram hereinafter referred to as Party 2

Whereas Party-1 has approached Party-2 for providing required training in Fashion Technology to the Students of B.Com. Studying in SKR College for Women, Rajamahendravarm. Whereas Party-2 has agreed to provide the necessary training in Fashion Technology.

The MOU is drawn up with the following terms.

The students will be sent in batches of ten each for five weeks from September to December every year to the party-2 Fashion Technology Training Centre in Luthara Giri Campus, Rajamahendravaram.

Party-2 will be providing practical training in Tailoring, Embroidery Designing, and Beautician Course without charging any fee from the students.

The students will be sent in batches of ten each for five weeks from September to December every year to the party-2 at Godavari institute of Fashion Technology, Rajamahendravaram.

The agreement is drawn up with the mutual consent of both the parties.

Dr. MAJOR. B. KALYANI
In-Charge of the Dept. Of Commerce
S.K.R. College for Women,
RAJAMAHENDRAVARAM

K. Sailaja
In-charge Principal
Godavari Institute of Fashion Technology
RAJAMAHENDRAVARAM

PRINCIPAL
Godavari Institute of Fashion Technology
RAJAHMUNDRY-533105.
Ph. 461941

**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

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. 1968
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-500018, 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,

ADIKAVI NANNAYA UNIVERSITY
UNIVERSITY COLLEGE OF
SCIENCE AND TECHNOLOGY
RAJAMAHENDRAVARAM - 533296

# K. LAKSHMI PRIYA

| | | |
|---|---|---|
| DEPARTMENT | : | Organic Chemistry |
| COURSE | : | M.Sc Organic Chemistry |
| ADMIT .NO | : | 2288533011 |
| ADMIT BATCH | : | 2022 - 2024 |
| STUDENT CELL NO | : | 9346499280 |
| FATHER CELL NO | : | 9347909026 |
| BLOOD GROUP | : | O+ |

P. Vijaya Kumari
Principal

Optum

Sri Brundhan S V P

Korukonda

Contractor

# ADIKAVI NANNAYA UNIVERSITY
## UNIVERSITY COLLEGE OF SCIENCE AND TECHNOLOGY
RAJAMAHENDRAVARAM - 533296

# K. BHAVANI

| | | |
|---|---|---|
| DEPARTMENT | : | Organic Chemistry |
| COURSE | : | M.Sc Organic Chemistry |
| ADMIT .NO | : | 2288533012 |
| ADMIT BATCH | : | 2022 - 2024 |
| STUDENT CELL NO | : | 8885966212 |
| FATHER CELL NO | : | 9346360212 |
| BLOOD GROUP | : | A+ |

P Vijaya Kumari
Principal

आन्ध्रप्रदेश केंद्रीय विश्वविद्यालय

CENTRAL UNIVERSITY OF ANDHRA PRADESH

Anantapuramu - 515002, Andhra Pradesh

B+

**JMSR SOWBHAGYA**

Course : MSc MATHEMATICS

Reg No. : 22MAT05

Aadhaar No. : 9943 2587 1930

Authorised Signatory

Permanent Address :

**Door No: 7-34, Indira Colony, Amalapuram Rural, Peruru, East Godavari, Andhra Pradesh - 533218**

# Smt. KANDUKURI RAJYALAKSHMI COLLEGE FOR WOMEN

Accredited at B+ level by NAAC (Estd : 1968)

Affiliated to Adikavi Nannayya University, Rajamahendravaram (ANUR)

(Under the control of HITHAKARINI SAMAJAM, Endowments Dept., Govt. of Andhra Pradesh)

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

Opp.T.T.D. Kalyana Mandapam, Danavaipeta
RAJAMAHENDRAVARAM - 533 103
East Godavari District, A.P., INDIA
☎ 0883 - 2467391, 90304 30758
e-mail : skrcollege@yahoo.com
website : www.skrcw-rjy.org


To
The Assistant commissioner & Correspondent
SKR College For Women,
Rajamahendravaram

Sub :- SKR College For Women, Rajamahendravaram – Submission of Feedback Report 2021-22 Reg.

This is to submit that, as an institutional practice, SKR College For 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 2021-2022, 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. COLLEGE FOR WOMEN
HITHAKARINI SAMAJ
Endowments Dept.,Govt.of Andhra
RAJAMAHENDRA

Asst. Commissioner & Correspondent
S.K.R. COLLEGE FOR WOMEN
HITHAKARINI SAMAJAM
Endowments Dept., Govt. of Andhra Pradesh
RAJAMAHENDRAVARAM

# SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

## Feedback Report 2021-2022

For the academic year 2021-2022, feedback on the college functioning including teaching learning process was collected from the students, teachers, parents and alumni in offline 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.

958students submitted their feedback which was collected by the class mentors. 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. COLLEGE FOR WOMEN
HITAKARINI SAMAJ
Endowments Dept., Govt. of Andhra Pradesh
RAJAMAHENDRAVARAM

# SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

## Action Taken Report on Feedback -2021-2022

The feedback report for the academic year 2021-2022 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.

S.K.R. College for Women ★ Rajamahendravaram ★

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

# SKR COLLEGE FOR WOMEN RAJAMAHENDRAVARAM

## Student Satisfaction Survey (SSS) on Teaching Learning & Evaluation for 2021-22

| Sl.No | Parameters | Excellent | | Very Good | | Good | | Satisfactory | | Poor | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No | % | No | % | No | % | No | % | No | % |
| 1 | Syllabus completion | 590 | 62 | 280 | 29 | 88 | 09 | 0 | 0 | 0 | 0 |
| 2 | Interest generated while teaching | 374 | 39 | 340 | 35 | 144 | 15 | 100 | 10 | 0 | 0 |
| 3 | Clarity of Expression | 320 | 33 | 436 | 46 | 180 | 19 | 22 | 02 | 0 | 0 |
| 4 | Depth of the Subject | 306 | 32 | 396 | 41 | 220 | 23 | 36 | 04 | 0 | 0 |
| 5 | Latest developments taught | 337 | 35 | 395 | 41 | 190 | 20 | 26 | 03 | 10 | 01 |
| 6 | Usage of student centric methods | 435 | 45 | 369 | 39 | 154 | 16 | 0 | 0 | 0 | 0 |
| 7 | Encouraging questions | 463 | 48 | 374 | 39 | 121 | 13 | 0 | 0 | 0 | 0 |
| 8 | Usage of various teaching models | 346 | 36 | 398 | 42 | 214 | 22 | 0 | 0 | 0 | 0 |
| 9 | Quality of notes | 511 | 53 | 270 | 28 | 177 | 18 | 0 | 0 | 0 | 0 |
| 10 | Arranging field visits, guest lectures etc. | 442 | 46 | 386 | 40 | 130 | 14 | 0 | 0 | 0 | 0 |
| 11 | Guidance in reading library books | 373 | 39 | 332 | 35 | 253 | 26 | 0 | 0 | 0 | 0 |
| 12 | Encouragement to students | 302 | 32 | 361 | 38 | 295 | 31 | 0 | 0 | 0 | 0 |
| 13 | Regularity and seriousness in evaluation | 382 | 40 | 460 | 48 | 116 | 12 | 0 | 0 | 0 | 0 |
| 14 | Remedial coaching | 425 | 44 | 323 | 34 | 210 | 22 | 0 | 0 | 0 | 0 |
| 15 | Regularity to the class | 530 | 55 | 292 | 30 | 136 | 14 | 0 | 0 | 0 | 0 |
| 16 | Guide students in co-curricular and extra curricular | 492 | 51 | 274 | 29 | 192 | 20 | 0 | 0 | 0 | 0 |
| 17 | Counseling and career guidance | 280 | 29 | 360 | 38 | 292 | 30 | 26 | 03 | 0 | 0 |
| 18 | Accessibility outside the class | 393 | 41 | 350 | 37 | 215 | 22 | 0 | 0 | 0 | 0 |
| 19 | Personal care and attention | 523 | 55 | 280 | 29 | 155 | 16 | 0 | 0 | 0 | 0 |
| 20 | Overall opinion on Teacher Performance | 412 | 43 | 370 | 39 | 176 | 18 | 0 | 0 | 0 | 0 |

S.K.R. College for Women Rajamahendravaram

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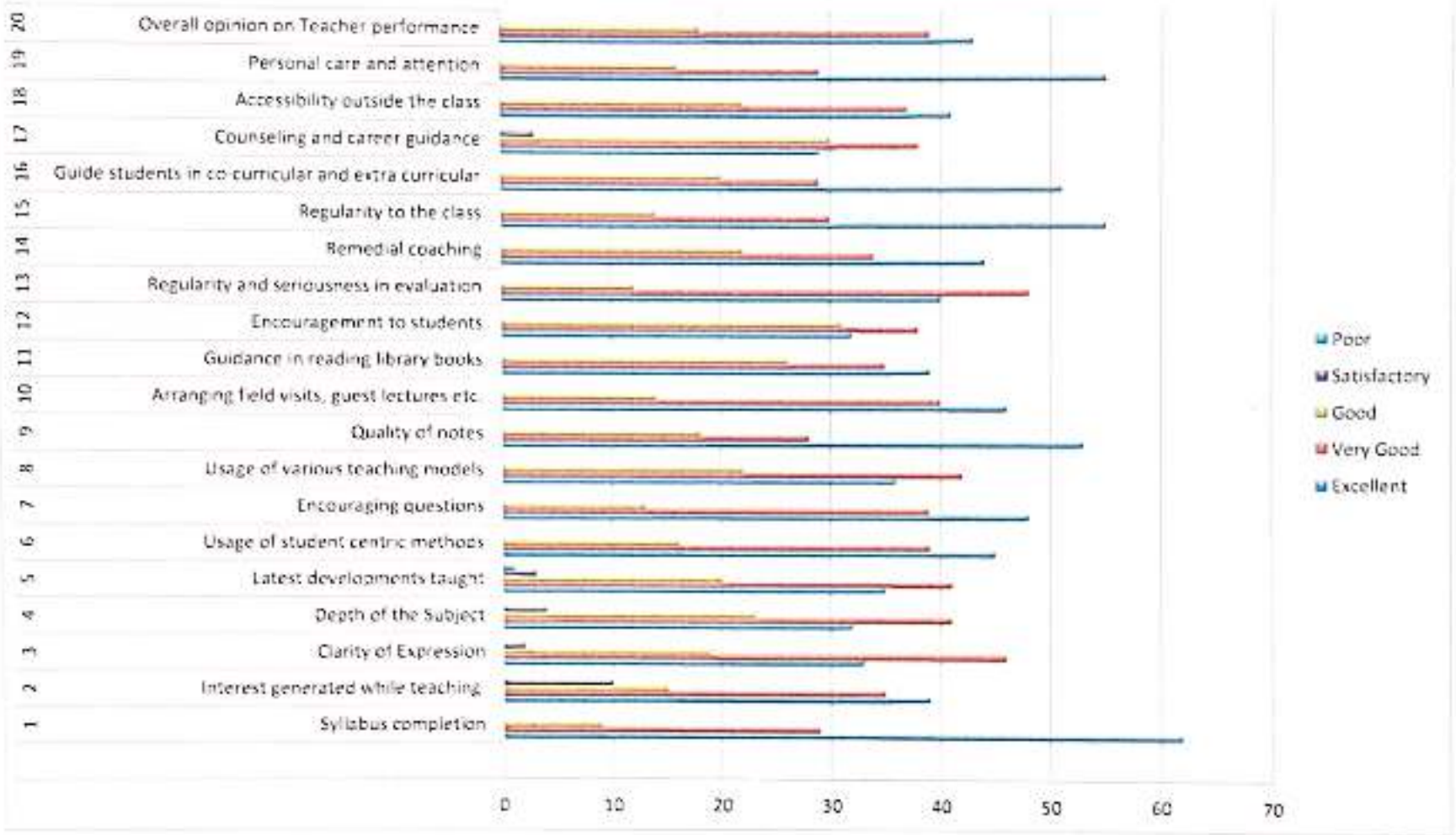
RAJAMAHENDRAVARAM

# Analysis of Student Survey Feed back - 2021-2022




S.K.R. College for Women

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HITHAKARINI SAMAJ

## SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

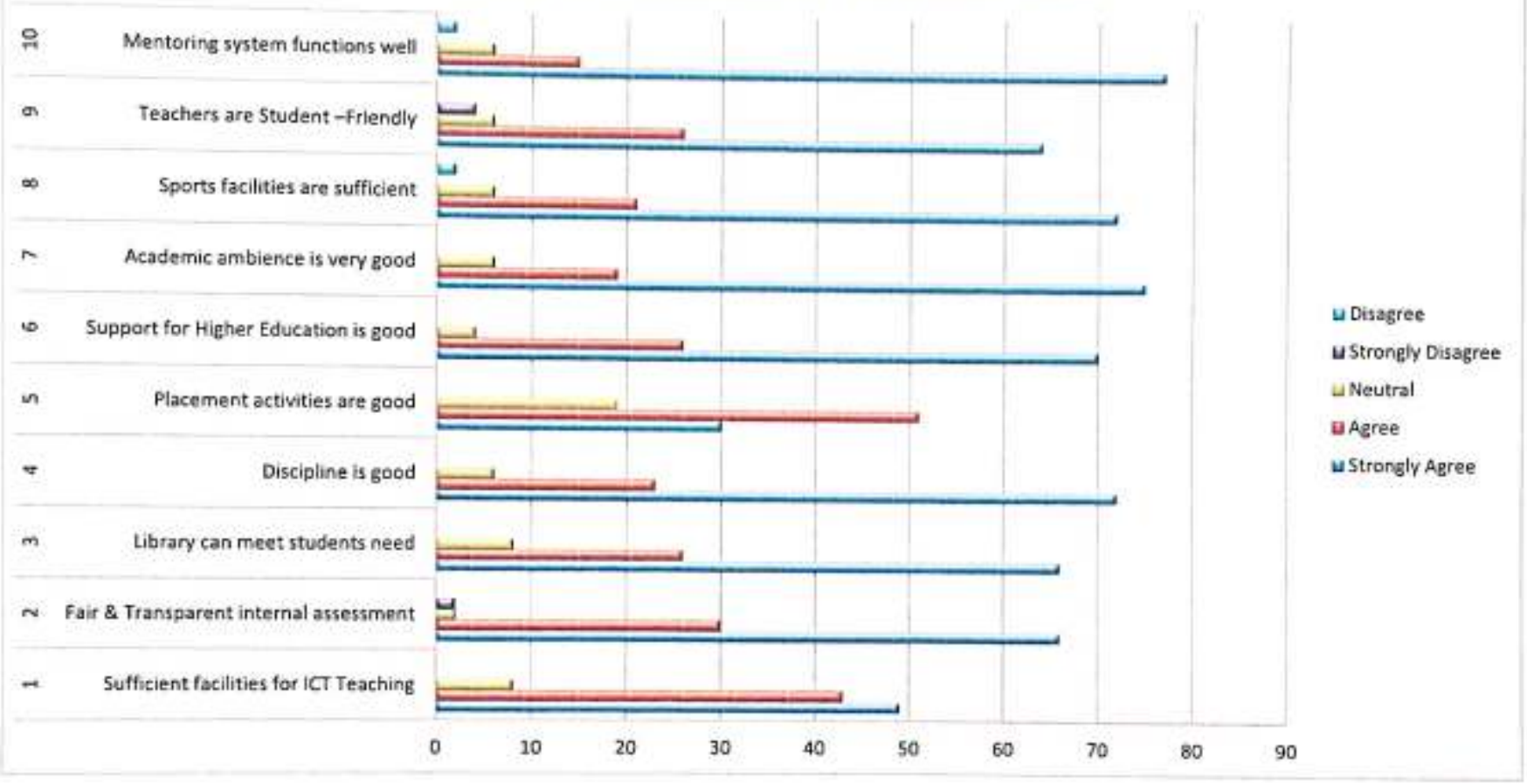
## Teacher Feed Back Analysis – 2021-2022

| Sl.No | Parameters | Strongly Agree | | Agree | | Neutral | | Strongly Disagree | | Disagree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 1 | Sufficient facilities for ICT Teaching | 26 | **49** | 23 | **43** | 04 | **08** | 0 | **0** | 0 | **0** |
| 2 | Fair & Transparent internal assessment | 35 | **66** | 16 | **30** | 01 | **02** | 01 | **02** | 0 | **0** |
| 3 | Library can meet students need | 35 | **66** | 14 | **26** | 04 | **08** | 0 | **0** | 0 | **0** |
| 4 | Discipline is good | 38 | 72 | 12 | **23** | 03 | **06** | 0 | **0** | 0 | **0** |
| 5 | Placement activities are good | 16 | **30** | 27 | **51** | 10 | **19** | 0 | **0** | 0 | **0** |
| 6 | Support for Higher Education is good | 37 | **70** | 14 | **26** | 02 | **04** | 0 | **0** | 0 | **0** |
| 7 | Academic ambience is very good | 40 | **75** | 10 | **19** | 03 | **06** | 0 | **0** | 0 | **0** |
| 8 | Sports facilities are sufficient | 38 | 72 | 11 | **21** | 03 | **06** | 0 | **0** | 01 | **02** |
| 9 | Teachers are Student – Friendly | 34 | **64** | 14 | **26** | 03 | **06** | 02 | **04** | 0 | **0** |
| 10 | Mentoring system functions well | 41 | **77** | 08 | **15** | 03 | **06** | 0 | **0** | 01 | **02** |

S.K.R. College for Women ★ Rajamahendravaram ★

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

# Analysis of Teacher Feed Back 2021-2022




S.K.R. College for Women * Rajamahendravaram *

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

## SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

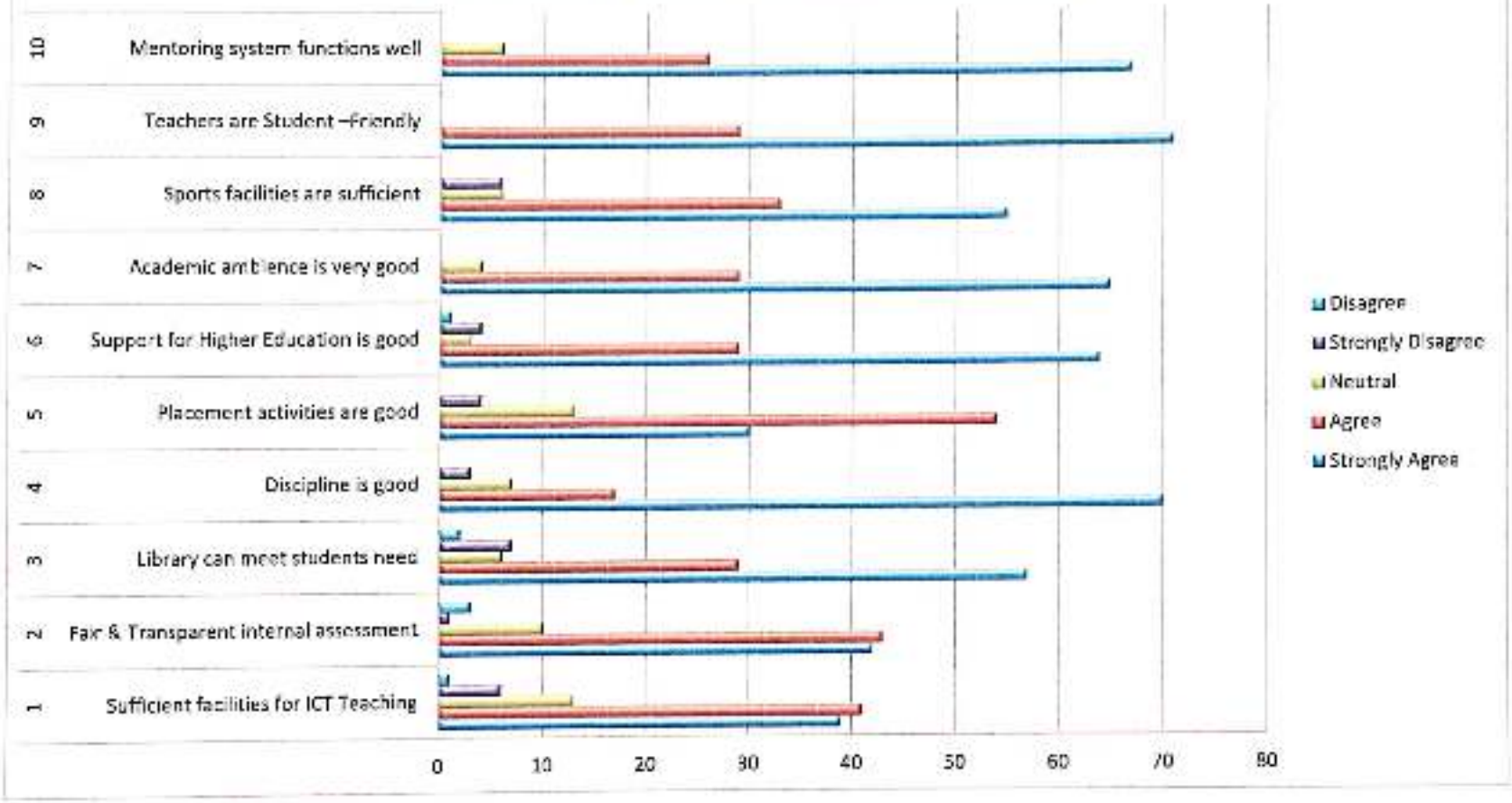
## Alumni Feed Back Analysis – 2021-2022

| SI.No | Parameters | Strongly Agree | | Agree | | Neutral | | Strongly Disagree | | Disagree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 1 | Sufficient facilities for ICT Teaching | 27 | **39** | 28 | **41** | 09 | **13** | 04 | **06** | 01 | **01** |
| 2 | Fair & Transparent internal assessment | 29 | **42** | 30 | **43** | 07 | **10** | 01 | **01** | 02 | **03** |
| 3 | Library can meet students need | 39 | **57** | 20 | **29** | 04 | **06** | 05 | **07** | 01 | **02** |
| 4 | Discipline is good | 48 | **70** | 12 | **17** | 05 | **07** | 02 | **03** | 0 | **0** |
| 5 | Placement activities are good | 20 | **30** | 37 | **54** | 09 | **13** | 03 | **04** | 0 | **0** |
| 6 | Support for Higher Education is good | 44 | **64** | 20 | **29** | 02 | **03** | 03 | **04** | 01 | **01** |
| 7 | Academic ambience is very good | 45 | **65** | 20 | **29** | 03 | **04** | 0 | **0** | 0 | **0** |
| 8 | Sports facilities are sufficient | 38 | **55** | 23 | **33** | 04 | **06** | 04 | **06** | 0 | **0** |
| 9 | Teachers are Student – Friendly | 49 | **71** | 20 | **29** | 0 | **0** | 0 | **0** | 0 | **0** |
| 10 | Mentoring system functions well | 46 | **67** | 18 | **26** | 04 | **06** | 0 | **0** | 0 | **0** |

S.K.R. College for Women ★ Rajamahendravaram

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

# Analysis of Alumni Feed Back 2021-2022




S.K.R. College for Women ★ Rajamahendravaram ★

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

# SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

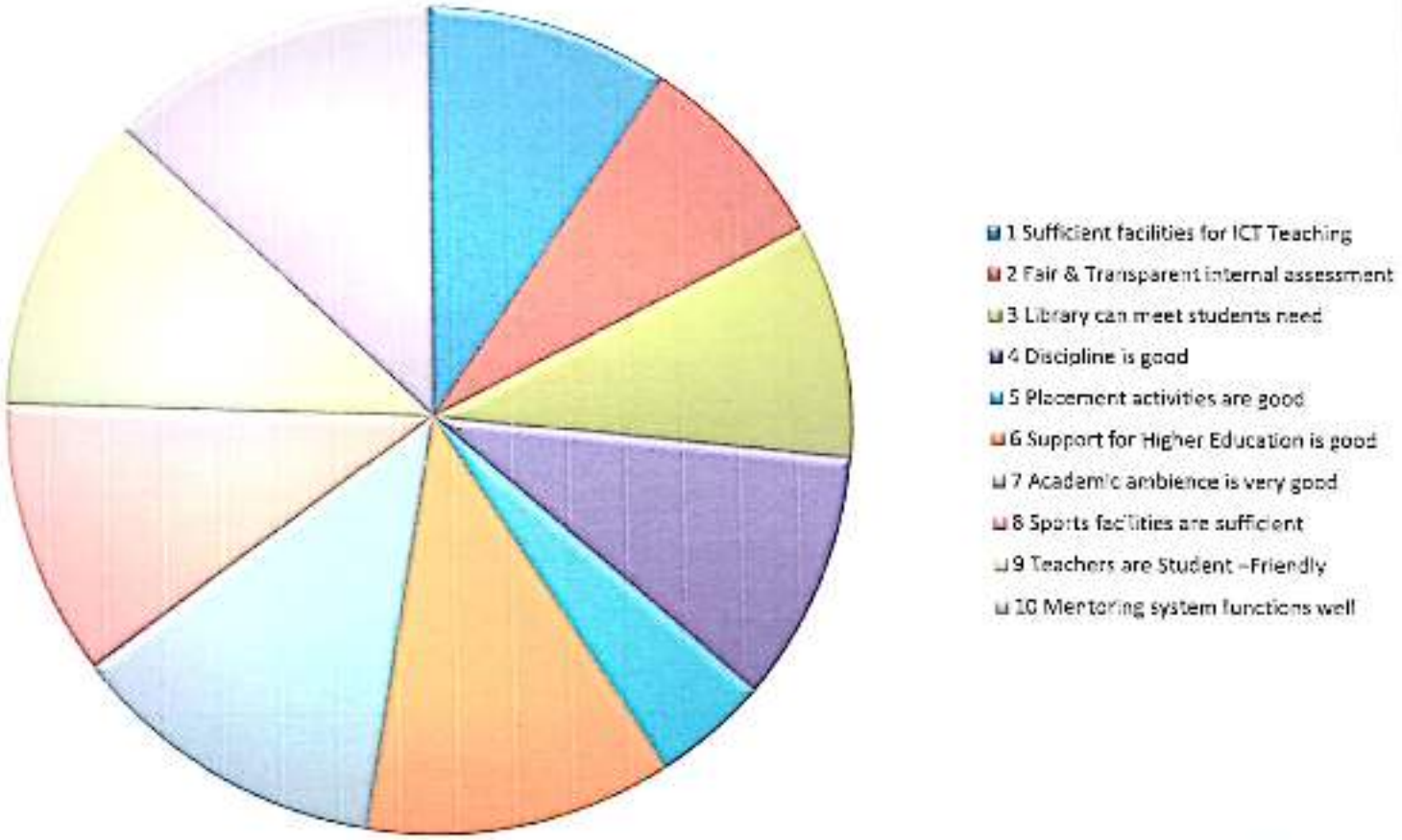
## Parent Feed Back Analysis – 2021-2022

| Sl.No | Parameters | Strongly Agree | | Agree | | Neutral | | Strongly Disagree | | Disagree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 1 | Sufficient facilities for ICT Teaching | 33 | 52 | 22 | 35 | 04 | 06 | 04 | 04 | 0 | 0 |
| 2 | Fair & Transparent internal assessment | 28 | 44 | 28 | 44 | 05 | 08 | 0 | 0 | 02 | 03 |
| 3 | Library can meet students need | 32 | 51 | 25 | 40 | 05 | 08 | 01 | 02 | 0 | 0 |
| 4 | Discipline is good | 34 | 54 | 22 | 35 | 06 | 10 | 01 | 02 | 0 | 0 |
| 5 | Placement activities are good | 16 | 25 | 35 | 56 | 11 | 17 | 01 | 02 | 0 | 0 |
| 6 | Support for Higher Education is good | 41 | 65 | 17 | 27 | 07 | 11 | 01 | 02 | 0 | 0 |
| 7 | Academic ambience is very good | 42 | 67 | 16 | 25 | 06 | 10 | 0 | 0 | 01 | 02 |
| 8 | Sports facilities are sufficient | 37 | 59 | 23 | 37 | 03 | 05 | 01 | 02 | 0 | 0 |
| 9 | Teachers are Student – Friendly | 41 | 65 | 18 | 29 | 03 | 05 | 01 | 02 | 0 | 0 |
| 10 | Mentoring system functions well | 45 | 71 | 11 | 17 | 05 | 08 | 01 | 02 | 0 | 0 |

S.K.R. College for Women

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

# Analysis of Parent Feed Back 2021-2022




S.K.R. College for Women ★ Rajamahendravaram

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

# SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

## DEPARTMENT OF CHEMISTRY

## BEST PRACTICE 2021-22

## ACTIVITY 1: PRACTICE IN PREPARATION FOR PAIN BALM AND VASELINE

### 1. Title of the Practice

SKILL DEVELOPMENT – PREPARATION OF HOUSEHOLD CHEMICALS

### 2. Objectives of the Practice

The role of household chemicals is alarming nowadays with the inflation of prices. To overcome this at least the daily household chemicals are to be prepared ourselves, which leads to minimizing the family expenditure.

### 3. The Context

Household chemicals and bath soaps can be prepared with meager effort and expenditure. The Bath Soaps, Vaseline, and pain balms can be prepared in the houses themselves with less effort.

### 4. The Practice

Department of Chemistry is in the practice of encouraging the students to prepare of Bath Soaps, Vaseline, and pain balms.

### 5. Evidence of Success

Department of Chemistry involved the students in the preparation of household chemicals and made them more proficient in preparation. With the sale of household chemicals, ***meager revenue is also generated.***

### 6. Problems encountered and resources required

The preparation of cloth bags is an expensive task. The staff of the department can't contribute always, hence financial aid should be supported to continue the practice.

Preparation of pain balm

Preparation of Vaseline

# SKR COLLEGE FOR WOMEN, RAJAMAHENDRAVARAM

## DEPARTMENT OF CHEMISTRY

## BEST PRACTICE 2021-22

## ACTIVITY -2: CAMPAIGN IN CONNECTION WITH PAPER BAG DAY

### 1. Title of the Practice

SKILL DEVELOPMENT – PREPARATION OF HOUSEHOLD CHEMICALS

### 2. Objectives of the Practice

The role of household chemicals is alarming nowadays with the inflation of prices. To overcome this at least the daily household chemicals are to be prepared ourselves, which leads to minimizing the family expenditure.

### 3. The Context

Household chemicals and bath soaps can be prepared with meager effort and expenditure. The Bath Soaps, Vaseline, and pain balms can be prepared in the houses themselves with less effort.

### 4. The Practice

Department of Chemistry is in the practice of encouraging the students in preparation of Bath Soaps, Vaseline, and pain balms.

### 5. Evidence of Success

Department of Chemistry involved the students in the preparation of household chemicals and made them more proficient in preparation. With the sale of household chemicals, ***meager revenue is also generated.***

### 6. Problems encountered and resources required

The preparation of cloth bags is an expensive task. The staff of the department can't contribute always, hence financial aid should be supported to continue the practice.