

| ANNUAL CURRICULAR                             |      |                 |   |  | 21-BS224 PLAN (Year) Organic & General Chemistry |                |                   |                       |                         |                |                   |                       |   |
|---|------|-----------------|---|--|--|----------------|-------------------|-----------------------|-------------------------|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER : B. Tulani Kotewani Bai |      |                 |   |  | CLASS : IBSc CB2 Semester : II                   |                |                   |                       | Paper : II - Chem       |                |                   |                       |   |
| MONTH   | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                              |                |                   |                       | CO- CURRICULAR ACTIVITY |                |                   |                       |   |
|   |      |                 |   |  | Activity Conducted                               | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted      | Hours Allotted | Whether Conducted | If not Alternate Date |   |
| June  | 1st  | 5               | Syllabus Dictation, unit-I: Recapitulation of   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Basics of organic chemistry   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Carbon-carbon sigma bonds (Alkanes & cycloalkanes)                                      | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | General methods of preparation of alkanes   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Wurtz and Wurtz-Fittig reaction   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Corey House synthesis   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Physical and chemical properties of alkanes   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Isomerism and its effect on properties  | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Free radical substitutions; Halogenation, concept of relative reactivity & selectivity. | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | Conformational analysis of alkanes  | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |
|   |      |                 | (Conformations)   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — |

B. Tulani  
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| ANNUAL CURRICULAR                             |      |                 |   |  | PLAN (Year)                           |                |                   |                       |   |                |                   |                       |   |
|---|------|-----------------|---|--|---------------------------------------|----------------|-------------------|-----------------------|---|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER : B. Tulani Kotawani Bai |      |                 |   |  | 21-BS224 CLASS : B.Sc CBZ Semester IV |                |                   |                       | Organic & General chemistry Paper : P. Chemistry - II |                |                   |                       |   |
| MONTH   | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                   |                |                   |                       | CO-CURRICULAR ACTIVITY                                |                |                   |                       |   |
|   |      |                 |   |  | Activity Conducted                    | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                                    | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|   |      |                 | relative stability and energy diagrams of Ethane, propane and butane  | —  | —                                     | —              | —                 | —                     | —   | —              | —                 | —                     | — |
|   | 2nd  | 5               | General molecular formulae of cyclo-alkanes and   | —  | —                                     | —              | —                 | —                     | —   | —              | —                 | —                     | — |
|   |      |                 | relative stability, Baeyer's strain theory, cyclohexane conformations with energy diagrams, conformations of mono substituted cyclohexane | Preparation methods for cyclo alkanes            | —                                     | —              | —                 | —                     | —   | —              | —                 | —                     | — |
|   |      |                 | Carbon-Carbon pi Bonds (Alkenes and Alkynes). General methods of preparation, physical and chemical properties.                           | —  | —                                     | —              | —                 | —                     | —   | —              | —                 | —                     | — |
|   | 3rd  | 5               | Mechanism of E <sub>1</sub> , E <sub>2</sub> , E <sub>1cB</sub> reactions.  | —  | Ppt will be shown.                    | —              | —                 | —                     | —   | —              | —                 | —                     | — |

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| ANNUAL CURRICULAR                            |                 |                 |  |  | 21-BS-224 PLAN (Year) Organic & General Chemistry<br>CLASS: BSc CBZ Semester: II Paper: Chemistry-II |                |                   |                       |                        |                |                   |                       |
|--|-----------------|-----------------|--|--|--|----------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|
| NAMR OF THE LECTURER : B. Tulani Kotawan Bai |                 |                 |  |  | CURRICULAR ACTIVITY  |                |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |
| MONTH  | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | Activity Conducted   | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |
|  |                 |                 | Saytzeff and Hoffmann eliminations. Electrophilic Additions, mechanism (Markonikov/Anti Markonikov addition) with suitable examples, syn and anti-addition; addition of H <sub>2</sub> , X <sub>2</sub> , HX. Oxymercuration-demercuration | —  | —  | —              | —                 | —                     | —                      | —              | —                 | —                     |
|  |                 |                 | Hydroboration-oxidation, ozonolytic, hydroxylation.  | —  | —  | —              | —                 | —                     | —                      | —              | —                 | —                     |
|  |                 |                 | Diels-Alder reaction 1,2- and 1,4-addition reactions in conjugated dienes.   | —  | —  | —              | —                 | —                     | —                      | —              | —                 | —                     |
|  |                 |                 | Reactions of alkynes acidity, electrophilic and nucleophilic addition, hydration to form carbonyl  | —  | —  | —              | —                 | —                     | —                      | —              | —                 | —                     |
|  | 4 <sup>th</sup> | 5               |  | —  | Youtube Video will be shown.   | —              | —                 | —                     | —                      | —              | —                 | —                     |

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| ANNUAL CURRICULAR                             |      |                 |  |  | 21-BS 224 PLAN (Year) Organic & General Chemistry |                |                   |                       |                          |                |                   |                       |   |
|---|------|-----------------|--|--|---|----------------|-------------------|-----------------------|--------------------------|----------------|-------------------|-----------------------|---|
| NAME OF THE LECTURER : B. Tulani Kotewani Bai |      |                 |  |  | CLASS : BSc CBZ Semester : II                     |                |                   |                       | Paper : II, Chemistry-II |                |                   |                       |   |
| MONTH   | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                               |                |                   |                       | CO-CURRICULAR ACTIVITY   |                |                   |                       |   |
|   |      |                 |  |  | Activity Conducted                                | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted       | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|   |      |                 | Compounds, Alkylation of terminal alkynes              | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
| September                                     | 1st  | 5               | unit-III<br>Benzene and its reactivity                 | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   |      |                 | Concept of aromaticity, Huckel's rule - application to | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   |      |                 | Benzenoid (Benzene, Naphthalene) and Non-Benzenoid     | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   |      |                 | compounds (cyclopropenyl cation, cyclopentadienyl)     | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   |      |                 | anion and tropylium cation) Reactions - General        | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   |      |                 | mechanism of electrophilic aromatic substitution,      | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   |      |                 | mechanism of nitration -                               | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|   | 2nd  | 5               | Friedel-Craft's alkylation and acylation               | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |

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| ANNUAL CURRICULAR                            |      |                 |   |  | 21-BS224 PLAN (Year) Organic & General Chemistry |                |                   |                       |                         |                |                   |                       |   |   |
|--|------|-----------------|---|--|--|----------------|-------------------|-----------------------|-------------------------|----------------|-------------------|-----------------------|---|---|
| NAMR OF THE LECTURER : B Tulani Kotewani Bai |      |                 |   |  | CLASS : BSc CO2 Semester : II                    |                |                   |                       | Paper : II Chemistry-II |                |                   |                       |   |   |
| MONTH  | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                              |                |                   |                       | CO-CURRICULAR ACTIVITY  |                |                   |                       |   |   |
|  |      |                 |   |  | Activity Conducted                               | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted      | Hours Allotted | Whether Conducted | If not Alternate Date |   |   |
|  |      |                 | Orientation of aromatic substitution - ortho para and meta directing groups. Ring activating and deactivating groups with examples (Electronic interpretation of various like NO <sub>2</sub> and phenolic) | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — | — |
|  |      |                 | Orientation of (i) Amino, methoxy and methyl groups.  | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — | — |
|  |      |                 | (ii) Carboxy, nitro, nitrile and carbonyl and sulphonic acid groups   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — | — |
|  |      |                 | (iii) Halogens. (Explanation by taking minimum of one example from each type)   | —  | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — | — |
|  |      |                 | unit-IV<br>1. Surface chemistry<br>colloids - coagulation   | Lyophobic & Lyophobic Colloids                   | —  | —              | —                 | —                     | —                       | —              | —                 | —                     | — | — |

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| ANNUAL CURRICULAR                              |                 |                 |   |  | 21-BS224 PLAN (Year) Organic & General Chemistry |                |                   |                       |                          |                |                   |                       |   |
|--|-----------------|-----------------|---|--|--|----------------|-------------------|-----------------------|--------------------------|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER : B. Tulani Koteswari Bai |                 |                 |   |  | CLASS : BSc CB2 Semester : II                    |                |                   |                       | Paper : II, Chemistry-II |                |                   |                       |   |
| MONTH  | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                              |                |                   |                       | CO-CURRICULAR ACTIVITY   |                |                   |                       |   |
|  |                 |                 |   |  | Activity Conducted                               | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted       | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|  |                 |                 | of colloids - Hardy Schutze rule. Stability of colloids,      | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | protection of colloids Gold number. Adsorption - Physical     | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | and chemical adsorption Langmuir adsorption                   | Freundlich adsorption Isotherm                   | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | isotherm, applications of adsorption.                         | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  | 3 <sup>rd</sup> | 5               | 2. chemical Bonding valence bond theory, hybridisation,       | Types of chemical bonds.                         | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | VB theory as applied to $CF_3$ , $Ni(CO)_4$ Molecular orbital | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | theory - LCAO method construction of MO diagrams for homo-    | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | nuclear and hetero nuclear diatomic molecules ( $N_2, O_2,$   | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |                 |                 | CO and NO).   | —  | —  | —              | —                 | —                     | —                        | —              | —                 | —                     | — |

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| ANNUAL CURRICULAR                              |                 |                 |  |  | 21-BS-224 PLAN (Year)           |                |                   |                       | Organic and General Chemistry Paper: II che-II |                |                   |                       |   |
|--|-----------------|-----------------|--|--|---------------------------------|----------------|-------------------|-----------------------|--|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER : B. Tulasi Koteswari bai |                 |                 |  |  | CLASS : I BSc CB2 Semester : II |                |                   |                       |  |                |                   |                       |   |
| MONTH  | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY             |                |                   |                       | CO- CURRICULAR ACTIVITY                        |                |                   |                       |   |
|  |                 |                 |  |  | Activity Conducted              | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                             | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|  | 4 <sup>th</sup> | 5               | 3. H-S-A-B<br>Pearson's concept, HSAB principle, its importance, bonding in Hard-Hard and Soft-Soft combinations - | Applications of HSAB                             | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 | und-IV<br>Stereochemistry of carbon compounds  | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 | molecular representations - wedge Fischer, Newman  | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 | Saw-horse formulae   | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 | Optical isomerism:   | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 | optical activity - wave nature of light, plane polarised   | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 | light, optical rotation and specific rotation  | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |
|  |                 |                 |  | —  | —                               | —              | —                 | —                     | —  | —              | —                 | —                     | — |

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| ANNUAL CURRICULAR                            |      |                 |   |  | PLAN (Year) organic and General chemistry |                |                   |                       |                          |                |                   |                       |   |
|--|------|-----------------|---|--|---|----------------|-------------------|-----------------------|--------------------------|----------------|-------------------|-----------------------|---|
| NAME OF THE LECTURER : B. Tulani Kotawaribai |      |                 |   |  | CLASS : BSc CBZ Semester : II             |                |                   |                       | Paper : II, Chemistry-II |                |                   |                       |   |
| MONTH  | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                       |                |                   |                       | CO-CURRICULAR ACTIVITY   |                |                   |                       |   |
|  |      |                 |   |  | Activity Conducted                        | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted       | Hours Allotted | Whether Conducted | If not Alternate Date |   |
| October                                      | 1st  | 5               | chiral-molecules - definition, and criteria (Symmetry elements) - Definition of enantiomers and diastereomers - | Mesomers - Definition, examples.                 | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |      |                 | Explanation of optical isomerism with examples -  | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |      |                 | Glyceraldehyde Lactic acid, Alanine Tartaric acid, 2,3-   | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |      |                 | dibromo pentane. D,L,R,S and E,Z- Configuration with examples.  | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |      |                 | Definition of Racemic mixture -   | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  |      |                 | Resolution of racemic mixtures (any 3) techniques   | —  | —   | —              | —                 | —                     | —                        | —              | —                 | —                     | — |
|  | 2nd  | 02              | —   | Remedial class                                   | Remedial-2                                | 2              | Yes               | —                     | —                        | —              | —                 | —                     | — |
|  | 3rd  | 02              | —   | Remedial class                                   | Remedial-2                                | 2              | Yes               | —                     | —                        | —              | —                 | —                     | — |
|  | 4th  | 03              | —   | Remedial class                                   | Remedial-1                                | 1              | Yes               | —                     | —                        | —              | —                 | —                     | — |
|  |      |                 | —   | Remedial class                                   | Remedial-2                                | 2              | Yes               | —                     | —                        | —              | —                 | —                     | — |

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**CURRICULUM LECTURER WISE 2019-2020**

| ANNUAL CURRICULAR    |      |                 |  |  | PLAN (Year)                     |                |                                     |                       |                        |                |                   |                       |   |
|----------------------|------|-----------------|--|--|---------------------------------|----------------|-------------------------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER |      |                 |  |  | CLASS :                         | Semester :     | Paper :                             |                       |                        |                |                   |                       |   |
| P. RAMYA KRISHNA     |      |                 |  |  | BSC                             | IV             | spectroscopy and physical chemistry |                       |                        |                |                   |                       |   |
| MONTH                | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY             |                |                                     |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |   |
|                      |      |                 |  |  | Activity Conducted              | Hours Allotted | Whether Conducted                   | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |   |
| APRIL                | 2nd  | 4               | phase rule, concept of phase, components degrees of freedom  | -  | -                               | -              | -                                   | -                     | -                      | -              | -                 | -                     | - |
|                      |      |                 | water system and Ag-pb system and its application            | -  | -                               | -              | -                                   | -                     | -                      | -              | -                 | -                     | - |
|                      | 3rd  | 5               | NaCl-water system, Freezing mixtures, colligative properties | Freezing mixtures experiment                     | will be shown freezing mixtures | 01             | yes                                 | -                     | -                      | -              | -                 | -                     | - |
|                      | 4th  | 5               | Raoult's law, osmotic pressure, elevation in Boiling point   | -  | -                               | -              | -                                   | -                     | -                      | -              | -                 | -                     | - |
| MAY                  | 1st  | 5               | Depression in Freezing point, vant' Hoff factor              | -  | -                               | -              | -                                   | -                     | -                      | -              | -                 | -                     | - |
|                      | 2nd  | 5               | spectroscopy: Beer Lambert's law, and its applications       | st   | student seminar                 | 01             | yes                                 | -                     | seminar                | 01             | yes               | -                     | - |

*P. Ramya Krishna*  
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**CURRICULUM LECTURER WISE 2019 - 2020**

| ANNUAL CURRICULAR    |                 |                 |   |  | PLAN (Year)                           |                |                   |                       |                                   |                |                   |                       |  |
|----------------------|-----------------|-----------------|---|--|---------------------------------------|----------------|-------------------|-----------------------|-----------------------------------|----------------|-------------------|-----------------------|--|
| NAMR OF THE LECTURER |                 |                 |   |  | CLASS :                               | Semester :     |                   |                       | Paper :                           |                |                   |                       |  |
| P. RAMYA KRISHNA     |                 |                 |   |  | III B.S.C                             | IV             |                   |                       | Spectroscopy & physical chemistry |                |                   |                       |  |
| MONTH                | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                   |                |                   |                       | CO-CURRICULAR ACTIVITY            |                |                   |                       |  |
|                      |                 |                 |   |  | Activity Conducted                    | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                | Hours Allotted | Whether Conducted | If not Alternate Date |  |
|                      | 3 <sup>rd</sup> | 5               | single & double beam spectrophotometer, Interaction of electromagnetic radiation and types of molecular spectra | will be shown types of molecular spectra         |                                       |                |                   |                       |                                   |                |                   |                       |  |
|                      |                 |                 | types of electronic transitions   |  | PPT presentation of molecular spectra | 01             | yes               | -                     |                                   |                |                   |                       |  |
|                      | HTA             | 5               | effect of conjugation chromophore & auxochrome  |  |                                       |                |                   |                       |                                   |                |                   |                       |  |
|                      |                 |                 | different regions in IR   |  |                                       |                |                   |                       |                                   |                |                   |                       |  |
| JUNE                 | 1 <sup>st</sup> | 5               | Interpretation of IR spectra, characteristic absorption bands   |  |                                       |                |                   |                       |                                   |                |                   |                       |  |
|                      |                 |                 | principle of NMR, equivalent and  |  | debate                                | 01             | yes               | -                     | debate                            | 01             | yes               |                       |  |

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| ANNUAL CURRICULAR                      |      |                 |  | PLAN (Year)  |                     |                  |                   |                       |                        |                |                   |                       |   |
|--|------|-----------------|--|--|---------------------|------------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER: P. RAMYA KRISHNA |      |                 |  | CLASS: III BSC Semester: IV Paper: Spectroscopy & physical chemistry |                     |                  |                   |                       |                        |                |                   |                       |   |
| MONTH                                  | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC                                  | Additional Input/Value Addition Provided/ Taught                     | CURRICULAR ACTIVITY |                  |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |   |
|  |      |                 |  |  | Activity Conducted  | Hours Allotted   | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|  |      |                 | non equivalent protons, spin-spin coupling       | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | Applications of NMR Spectroscopy                 | Remedial class   | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
| June                                   | 2nd  | 5               | specific and equivalent conductances             | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | Arrhenius theory                                 | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | ostwald's dilution law                           | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
| June                                   | 3rd  | 5               | Debye-Huckel theory, transport                   | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | Number Applications of conductometric titrations | -  | -                   | Group discussion | 01                | yes                   | -                      | -              | -                 | -                     | - |
| June                                   | 4th  | 5               | single electrode potential                       | conductometric titrations experiments                                | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | Sign convention                                  | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | Reversible and irreversible                      | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |
|  |      |                 | Nernst equation                                  | -  | -                   | Quiz             | 01                | yes                   | -                      | Quiz           | 01                | yes                   | - |
|  |      |                 | SHE, calomel electrode                           | -  | -                   | -                | -                 | -                     | -                      | -              | -                 | -                     | - |

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## ANNUAL CURRICULAR

## PLAN (Year)

NAME OF THE LECTURER

P. RAMYA KRISHNA

CLASS: TIBSC

Semester: IV

Paper:

Spectroscopy &amp; Physical Chemistry

| MONTH | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC                                | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                  |                |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |   |
|-------|------|-----------------|--|--|--------------------------------------|----------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|---|
|       |      |                 |  |  | Activity Conducted                   | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |   |
| July  | 1st  | 3               | Indicator electrode, metal metal ion electrode | -  | Indicator electrode ppt presentation | 01             | yes               | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | Inert electrode                                | -  | -                                    | 1              | -                 | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | EMF Applications of EMF and                    | -  | -                                    | 1              | -                 | -                     | -                      | 2              | -                 | -                     | - |
|       |      |                 | Potentiometric titrations                      | will be conduct potentiometric titrations        | Potentiometric titrations            | 01             | yes               | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | -  | -  | -                                    | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | -  | -  | -                                    | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | -  | -  | -                                    | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | -  | -  | -                                    | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | -  | -  | -                                    | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|       |      |                 | -  | -  | -                                    | -              | -                 | -                     | -                      | -              | -                 | -                     | - |

P. Ramya  
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Signature of the Principal



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2020-2021**

| ANNUAL CURRICULAR                             |      |                 |  |   | PLAN (Year)                      |                |                   |                       |                        |                        |                   |                       |   |
|---|------|-----------------|--|---|----------------------------------|----------------|-------------------|-----------------------|------------------------|------------------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER <b>V. RAJA RAJESWARI</b> |      |                 |  |   | CLASS : <b>III BSC</b>           |                |                   | Semester : <b>VI</b>  |                        | Paper : <b>VII (A)</b> |                   |                       |   |
| MONTH   | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught    | CURRICULAR ACTIVITY              |                |                   |                       | CO-CURRICULAR ACTIVITY |                        |                   |                       |   |
|   |      |                 |  |   | Activity Conducted               | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted         | Whether Conducted | If not Alternate Date |   |
| Apr   | 3    | 2               | Introduction, Quantitative analysis<br>a) Importance in various fields of science.                   | Definition of Quantitative and Qualitative analysis | -                                | -              | -                 | -                     | -                      | -                      | -                 | -                     | - |
|   | 4    | 4               | Steps involved in chemical analysis<br>Principles of volumetric analysis - Theory                    | analysis with examples                              | -                                | -              | -                 | -                     | -                      | -                      | -                 | -                     | - |
|   | 5    | 3               | of acid-base, redox, complexometric, iodometric and precipitation titrations.                        | -   | -                                | -              | -                 | -                     | -                      | -                      | -                 | -                     | - |
| May   | 1    | 4               | Choice of indicators<br>b) Principles of gravimetric analysis - Precipitation,                       | -   | showing Desiccator and crucibles | -              | -                 | -                     | -                      | -                      | -                 | -                     | - |
|   | 2    | 4               | coagulation, peptization, co-precipitation, post precipitation                                       | -   | -                                | -              | -                 | -                     | -                      | -                      | -                 | -                     | - |
|   | 3    | 4               | digestion, filtration, washing, drying & ignition.<br>Treatment of analytical data - Types of errors | -   | -                                | -              | -                 | -                     | -                      | -                      | -                 | -                     | - |

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| ANNUAL CURRICULAR                             |      |                 |   |  | PLAN (Year)  |                |                   |                       |                         |                |                   |                       |
|---|------|-----------------|---|--|--|----------------|-------------------|-----------------------|-------------------------|----------------|-------------------|-----------------------|
| NAMR OF THE LECTURER <u>V. RAJA RAJESWARI</u> |      |                 |   |  | CLASS : <u>III BSC</u> Semester : <u>VI</u> Paper : <u>VII (A) Analytical methods in chemistry</u> |                |                   |                       | CO- CURRICULAR ACTIVITY |                |                   |                       |
| MONTH   | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught   | Activity Conducted   | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted      | Hours Allotted | Whether Conducted | If not Alternate Date |
| May   | 4    | 5               | Significant figures and its importance accuracy- methods of expressing accuracy, error analysis   | -  | -  | -              | -                 | -                     | -                       | -              | -                 | -                     |
| June  | 1    | 4               | minimization of errors, precision- methods of expressing precision, standard deviation, confidence limit  | -  | -  | -              | -                 | -                     | -                       | -              | -                 | -                     |
|   | 2    | 4               | Solvent extraction Introduction, principle, techniques, factors affecting solvent extraction, Batch extraction, continuous extraction and Counter current extraction, synergism | Definitions of solute, solvent, solvent extraction | -  | -              | -                 | -                     | -                       | -              | -                 | -                     |
|   | 3    | 4               | Det. of Iron (III), Ion exchange: Introduction, action of ion exchange, resin separation of manganese mixtures.   | Types of ion exchange resins.                      | -  | -              | -                 | -                     | -                       | -              | -                 | -                     |
|   | 5    | 2               | Chromatography classification of chromatography methods   | Definition of S-P, M.P and Chromatography          | -  | -              | -                 | -                     | -                       | -              | -                 | -                     |

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|---|------|-----------------|---|--|------------------------|----------------|----------------------|-----------------------|---|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER <b>V. RAJA RAJESWARI</b> |      |                 |   |  | CLASS : <b>III BSC</b> |                | Semester : <b>VI</b> |                       | Paper : <b>VII (A)</b> <i>Analytical methods in chemistry</i> |                |                   |                       |   |
| MONTH   | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught               | CURRICULAR ACTIVITY    |                |                      |                       | CO-CURRICULAR ACTIVITY  |                |                   |                       |   |
|   |      |                 |   |  | Activity Conducted     | Hours Allotted | Whether Conducted    | If not Alternate Date | Activity Conducted  | Hours Allotted | Whether Conducted | If not Alternate Date |   |
| July  | 1    | 4               | Principles of differential migration adsorption phenomena, nature of adsorbent, solvent systems,                        | -  | -                      | -              | -                    | -                     | -   | -              | -                 | -                     | - |
|   | 2    | 3               | R <sub>f</sub> values factors effecting R <sub>f</sub> values. Paper chromatography                                     | Identification of unknown sample by using R <sub>f</sub> value | -                      | -              | -                    | -                     | -   | -              | -                 | -                     | - |
|   | 3    | 4               | Principles, R <sub>f</sub> values experimental procedure choice of paper and solvent systems developments, applications | R <sub>f</sub> value   | -                      | -              | -                    | -                     | -   | -              | -                 | -                     | - |
|   | 4    | 4               | Thin layer chromatography - Advantages Principles factors effecting R <sub>f</sub> values. Experimental procedure       | Introduction of TLC  | showing TLC plates     | -              | -                    | -                     | -   | -              | -                 | -                     | - |
| Aug   | 1    | 4               | Adsorbents and solvents. Preparation of plates. Development of the chromatogram.  | -  | -                      | -              | -                    | -                     | -   | -              | -                 | -                     | - |
|   | 2    | 4               | Detection of spots. Applications. Column chromatography. Principles experimental procedures                             | Introduction of column chromatography                          | -                      | -              | -                    | -                     | Seminar   | 1              | Yes               | -                     | - |

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| ANNUAL CURRICULAR    |      |                 |  |  | PLAN (Year)        |                |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |         |  |  |  |
|----------------------|------|-----------------|--|--|--------------------|----------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|---------|--|--|--|
| NAMR OF THE LECTURER |      |                 |  |  | CLASS :            |                |                   |                       | Semester :             |                |                   |                       | Paper : |  |  |  |
| MONTH                | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | Activity Conducted | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |         |  |  |  |
| Aug                  | 3    | 4               | Stationary & mobile phases separation technique. Application of HPLC - Principle and application | Instrumentation of HPLC                          | -                  | -              | -                 | -                     | Debate<br>Quiz         | 1<br>1         | Yes               | -                     |         |  |  |  |
|                      | 4    | =               | -  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |
|                      |      |                 |  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |
|                      |      |                 |  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |
|                      |      |                 |  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |
|                      |      |                 |  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |
|                      |      |                 |  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |
|                      |      |                 |  |  |                    |                |                   |                       |                        |                |                   |                       |         |  |  |  |

*Analytical methods in chemistry*

*V.R. Rajeswari*  
Signature of the Lecturer

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**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2020- 2021**

| ANNUAL CURRICULAR                        |            |                 |   |  | PLAN (Year)  |                |                   |                       |  |                |                   |                       |          |
|--|------------|-----------------|---|--|--|----------------|-------------------|-----------------------|--|----------------|-------------------|-----------------------|----------|
| NAMR OF THE LECTURER : <i>K. SUJATHA</i> |            |                 |   |  | CLASS : <i>III B.Sc cluster</i> Semester : <i>VI</i> |                |                   |                       | Paper : <i>Polymer chemistry cluster A<sub>2</sub></i> |                |                   |                       |          |
| MONTH                                    | WEEK       | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                                  |                |                   |                       | CO-CURRICULAR ACTIVITY                                 |                |                   |                       |          |
|  |            |                 |   |  | Activity Conducted                                   | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                                     | Hours Allotted | Whether Conducted | If not Alternate Date |          |
| <i>April</i>                             | <i>2nd</i> | <i>4</i>        | <i>Introduction of polymers, basic definitions, types of polymerisation</i> | <i>-</i>   | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i> |
|  |            |                 | <i>classification of polymers, linear</i>                                   | <i>-</i>   | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i> |
|  |            |                 | <i>branched and cross linked polymers</i>                                   | <i>-</i>   | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i> |
|  | <i>3rd</i> | <i>4</i>        | <i>Addition and condensation of polymers, mechanism of free radical</i>     | <i>-</i>   | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i> |
|  |            |                 | <i>and ionic polymerisation, Ziegler</i>                                    | <i>-</i>   | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i> |
|  |            |                 | <i>Natta polymerisation</i>   | <i>-</i>   | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i>   | <i>-</i>       | <i>-</i>          | <i>-</i>              | <i>-</i> |

Signature of the Lecturer *K. Sujatha*

Signature of the HOD *B. D.*

Signature of the Principal *N. S. S.*



SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU  
CURRICULUM LECTURER WISE 2020- 2021

| ANNUAL CURRICULAR    |                 |                 |  |  | PLAN (Year)         |                |                   |                       |                        |                      |                                |                       |   |
|----------------------|-----------------|-----------------|--|--|---------------------|----------------|-------------------|-----------------------|------------------------|----------------------|--------------------------------|-----------------------|---|
| NAMR OF THE LECTURER |                 |                 |  |  | CLASS :             |                |                   |                       | Semester :             |                      | Paper :                        |                       |   |
| K-SUJATHA            |                 |                 |  |  | B.Sc class          |                |                   |                       | VI                     |                      | polymer chemistry<br>cluster A |                       |   |
| MONTH                | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY |                |                   |                       | CO-CURRICULAR ACTIVITY |                      |                                |                       |   |
|                      |                 |                 |  |  | Activity Conducted  | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted       | Whether Conducted              | If not Alternate Date |   |
| April                | 4 <sup>th</sup> | 3               | unit-II :<br>Techniques of polymerisation,<br>bulk polymerisation          | -  | Remedial<br>class   | 01             | Yes               | -                     | -                      | -                    | -                              | -                     |   |
|                      |                 |                 | Solution, Suspension<br>and emulsion<br>polymerisation                     | -  | -                   | -              | -                 | -                     | -                      | -                    | -                              | -                     |   |
| May                  | 1 <sup>st</sup> | 4               | no.1 average<br>molecular weight<br>and weight avg<br>molecular weight     | -  | -                   | -              | -                 | -                     | -                      | -                    | -                              | -                     |   |
|                      |                 |                 | determination of<br>molecular weight<br>osmometry and<br>viscometry.       | -  | -                   | -              | -                 | -                     | -                      | -                    | -                              | -                     |   |
|                      | 2 <sup>nd</sup> | 4               | Kinetics of free<br>radical polymeri-<br>sation, crosslinking              | -  | -                   | -              | -                 | -                     | -                      | PPT will be<br>shown | 01                             | Yes                   | - |
|                      |                 |                 | temperature and<br>determination of<br>T <sub>g</sub> , free volume theory | -  | -                   | -              | -                 | -                     | -                      | -                    | -                              | -                     | - |

Signature of the Lecturer *K-Sujatha*

Signature of the HOD *B.R.*

Signature of the Principal *Shilpa*



SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU  
CURRICULUM LECTURER WISE 20 20 21

| ANNUAL CURRICULAR    |                 |                 |   |  | PLAN (Year)              |                |                   |                       |                    |                |                   |                       |                        |  |
|----------------------|-----------------|-----------------|---|--|--------------------------|----------------|-------------------|-----------------------|--------------------|----------------|-------------------|-----------------------|------------------------|--|
| NAME OF THE LECTURER |                 |                 |   |  | CLASS : III B.Sc cluster |                |                   |                       | Semester : VI      |                | Paper : cluster A |                       | CO-CURRICULAR ACTIVITY |  |
| MONTH                | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | Activity Conducted       | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted | Hours Allotted | Whether Conducted | If not Alternate Date |                        |  |
| May                  | 3 <sup>rd</sup> | 4               | wlf equation, Factors effecting Tg.                                     | -  | -                        | -              | -                 | -                     | -                  | -              | -                 | -                     |                        |  |
|                      |                 |                 | plasticizers, softners, fillers.  | -  | -                        | -              | -                 | -                     | -                  | -              | -                 | -                     |                        |  |
|                      | 4 <sup>th</sup> | 4               | lubricants, flow promoters, Anti-aging additives,                       | -  | Remedial class           | 01             | yes               | -                     | -                  | -              | -                 | -                     |                        |  |
|                      |                 |                 | Flame retardants, colourants  | -  | -                        | -              | -                 | -                     | -                  | -              | -                 | -                     |                        |  |
| June                 | 1 <sup>st</sup> | 4               | Blowing agents, cross linking agents, flow promoters, photo stabilizers | -  | -                        | -              | -                 | -                     | -                  | -              | -                 | -                     |                        |  |
|                      |                 |                 |   | -  | -                        | -              | -                 | -                     | seminar            | 01             | yes               | -                     |                        |  |

Signature of the Lecturer

K. Sujatha

Signature of the HOD

B. R.

Signature of the Principal

K. R.



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 20 - 20**

| ANNUAL CURRICULAR                      |                       |                 |   |  | PLAN (Year)  |                |                   |                       |  |                |                   |                       |          |
|--|-----------------------|-----------------|---|--|--|----------------|-------------------|-----------------------|--|----------------|-------------------|-----------------------|----------|
| NAMR OF THE LECTURER <i>K. SUJATHA</i> |                       |                 |   |  | CLASS : <i>III B.Sc cluster</i> Semester : <i>VI</i> |                |                   |                       | Paper : <i>polymer chemistry cluster A</i> |                |                   |                       |          |
| MONTH                                  | WEEK                  | HOURS AVAILABLE | SYLLABUS/ TOPIC                               | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                                  |                |                   |                       | CO- CURRICULAR ACTIVITY                    |                |                   |                       |          |
|  |                       |                 |   |  | Activity Conducted                                   | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                         | Hours Allotted | Whether Conducted | If not Alternate Date |          |
| <i>June</i>                            | <i>2<sup>nd</sup></i> | <i>4</i>        | <i>nucleating agents, Flow promoters</i>      | <i>—</i>   | <i>—</i>   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i>                                   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i> |
|  |                       |                 | <i>cross linking agents</i>                   | <i>—</i>   | <i>—</i>   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>ppt will be shown</i>                   | <i>01</i>      | <i>yes</i>        | <i>—</i>              | <i>—</i> |
|  | <i>3<sup>rd</sup></i> | <i>4</i>        | <i>Industrial application of polyethylene</i> | <i>—</i>   | <i>—</i>   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i>                                   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i> |
|  |                       |                 | <i>poly vinyl chloride</i>                    | <i>—</i>   | <i>—</i>   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>Quiz</i>                                | <i>01</i>      | <i>yes</i>        | <i>—</i>              | <i>—</i> |
|  | <i>4<sup>th</sup></i> | <i>4</i>        | <i>Industrial applications of Teflon</i>      | <i>—</i>   | <i>—</i>   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i>                                   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i> |
|  |                       |                 | <i>Terelene</i>                               | <i>—</i>   | <i>remedial class</i>                                | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i>                                   | <i>—</i>       | <i>—</i>          | <i>—</i>              | <i>—</i> |

Signature of the Lecturer *K. Sujatha*

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SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU  
CURRICULUM LECTURER WISE 2020- 2021

| ANNUAL CURRICULAR    |                 |                 |  |  | PLAN (Year)                           |                |                   |                       |                                      |                  |                   |                       |   |
|----------------------|-----------------|-----------------|--|--|---------------------------------------|----------------|-------------------|-----------------------|--------------------------------------|------------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER |                 |                 |  |  | CLASS : M.R.Sc. cluster Semester : VI |                |                   |                       | Paper : polymer chemistry cluster A1 |                  |                   |                       |   |
| MONTH                | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC                            | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                   |                |                   |                       | CO- CURRICULAR ACTIVITY              |                  |                   |                       |   |
|                      |                 |                 |  |  | Activity Conducted                    | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                   | Hours Allotted   | Whether Conducted | If not Alternate Date |   |
| July                 | 1 <sup>st</sup> | 4               | preparation and industrial application of  | -  | -                                     | -              | -                 | -                     | -                                    | -                | -                 | -                     | - |
|                      |                 |                 | poly acryb nitrile, Nylon 6,6.             | -  | -                                     | -              | -                 | -                     | -                                    | -                | -                 | -                     | - |
|                      | 2 <sup>nd</sup> | 4               | preparation and industrial                 | -  | -                                     | -              | -                 | -                     | -                                    | Group Discussion | 01                | yes                   | - |
|                      |                 |                 | applications of silicones                  | -  | -                                     | -              | -                 | -                     | -                                    | -                | -                 | -                     | - |
|                      | 3 <sup>rd</sup> | 4               | preparation and industrial applications of | -  | -                                     | -              | -                 | -                     | -                                    | -                | -                 | -                     | - |
|                      |                 |                 | PAN.                                       |  |                                       |                |                   |                       |                                      |                  |                   |                       |   |

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**CURRICULUM LECTURER WISE 2020- 2021**

| ANNUAL CURRICULAR                        |                 |                 |  |  | PLAN (Year)                                 |                |                   |                       | Instrumental methods of analysis    |                |                   |                       |
|--|-----------------|-----------------|--|--|---|----------------|-------------------|-----------------------|-------------------------------------|----------------|-------------------|-----------------------|
| NAMR OF THE LECTURER <u>S.R. Tejaswi</u> |                 |                 |  |  | CLASS : <u>cluster</u> Semester : <u>VI</u> |                |                   |                       | Paper : <u>VIII - A<sub>2</sub></u> |                |                   |                       |
| MONTH                                    | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                         |                |                   |                       | CO-CURRICULAR ACTIVITY              |                |                   |                       |
|  |                 |                 |  |  | Activity Conducted                          | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted                  | Hours Allotted | Whether Conducted | If not Alternate Date |
| April                                    | 2 <sup>nd</sup> | 4hrs            | Introduction to spectroscopic methods of analysis - treatment of analytical data, error analysis, classification of analytical methods | -  | -   | -              | -                 | -                     | -                                   | -              | -                 | -                     |
|  |                 |                 |  | -  | -   | -              | -                 | -                     | -                                   | -              | -                 | -                     |
|  | 3 <sup>rd</sup> | 4hrs            | Types of Instrumental methods consideration of EMR.  | -  | -   | -              | -                 | -                     | -                                   | -              | -                 | -                     |
|  |                 |                 | IR spectroscopy - Absorption & scattering, light sources, separation of spectrum.  | -  | -   | -              | -                 | -                     | -                                   | -              | -                 | -                     |
|  | 4 <sup>th</sup> | 3hrs            | Detection of signal. Interpretation of spectrum, advantages of FTIR samples & Tullip   | FTIR instrumentation                             | -   | -              | -                 | -                     | -                                   | -              | -                 | -                     |
|  | 5 <sup>th</sup> | 4hrs            | Applications of quality assurance & quality control.   |  | Student Seminar                             | 01             | Yes               | -                     | Student Seminar                     | 01             | Yes               | -                     |

Signature of the Lecturer

S.R. Teji

Signature of the HOD

B. An

Signature of the Principal

Neha



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2020- 2021**

| ANNUAL CURRICULAR                       |                 |                 |  |  | PLAN (Year)            |                |                      |                       |  |                |                   |                       |   |
|---|-----------------|-----------------|--|--|------------------------|----------------|----------------------|-----------------------|--|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER <i>S.R. Tejawi</i> |                 |                 |  |  | CLASS : <i>cluster</i> |                | Semester : <i>VI</i> |                       | Paper : <i>cluster A2 Instrumental methods of Analysis</i> |                |                   |                       |   |
| MONTH                                   | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY    |                |                      |                       | CO- CURRICULAR ACTIVITY                                    |                |                   |                       |   |
|   |                 |                 |  |  | Activity Conducted     | Hours Allotted | Whether Conducted    | If not Alternate Date | Activity Conducted   | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|   |                 |                 | uv-spectroscopy - emission, absorption, fluorescence, photo acoustic, excitation source.                                 | -  | Quiz                   | 01             | Yes                  | -                     | -  | -              | -                 | -                     | - |
| May                                     | 1 <sup>st</sup> | 4 hrs           | wavelength dispersion, detection of signal, single & double beam instruments, Interpretation.                            | -  | -                      | -              | -                    | -                     | -  | -              | -                 | -                     | - |
|   | 2 <sup>nd</sup> | 4 hrs           | chromatography - Gas-liquid chromatography, super critical fluids, Importance of column technology packing, capillaries. | -  | -                      | -              | -                    | -                     | -  | -              | -                 | -                     | - |
|   | 3 <sup>rd</sup> | 4 hrs           | Separation based on increasing no. of factors. detection simple vs specific, detection of further analysis.              | -  | Debate                 | 01             | Yes                  | -                     | -  | -              | -                 | -                     | - |
|   |                 |                 |  | -  | -                      | -              | -                    | -                     | -  | -              | -                 | -                     | - |

Signature of the Lecturer  
*S.R. Teja*

Signature of the HOD

*BD*

Signature of the Principal

*Sahaja*



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2020- 2021**

| ANNUAL CURRICULAR                  |                 |                 |   |  | PLAN (Year) Instrumental methods of Analysis |                |                   |                       |                        |                |                   |                       |   |
|------------------------------------|-----------------|-----------------|---|--|--|----------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER S.R. Tejawari |                 |                 |   |  | CLASS : cluster                              |                |                   |                       | Semester : VI          |                | Paper : VIII - A2 |                       |   |
| MONTH                              | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                          |                |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |   |
|                                    |                 |                 |   |  | Activity Conducted                           | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|                                    | 4 <sup>th</sup> | 4hrs            | Mass spectroscopy- Making the gaseous molecules into ions                       | Mass principle.                                  | -  | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|                                    |                 |                 | Making liquids & solids into ions, separation of ions on basis of m/e ratio.    | -  | -  | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
| June                               | 1 <sup>st</sup> | 4hrs            | Resolution, time & multiple separations   | -  | Group Discussion                             | 01             | Yes               | -                     | -                      | -              | -                 | -                     | - |
|                                    |                 |                 | Detection & Interpretation.   | -  | -  | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|                                    | 2 <sup>nd</sup> | 4hrs            | Mass spectrometry :- Atomic spectroscopy, Atomic absorption,                    | -  | -  | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|                                    |                 |                 | Atomic emission, Atomic fluorescence.   | -  | will be shown ppt's                          | -              | -                 | -                     | -                      | -              | -                 | -                     | - |
|                                    | 3 <sup>rd</sup> | 4hrs            | Excitation & getting sample into gas phase, wave length separation & resolution | -  | -  | -              | -                 | -                     | -                      | -              | -                 | -                     | - |

S.R. Tejawari  
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Signature of the HOD B. R.

Signature of the Principal



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2020- 2021**

| ANNUAL CURRICULAR                          |                 |                 |   |  | PLAN (Year)         |                |                      |                       |  |                |                   |                       |   |
|--|-----------------|-----------------|---|--|---------------------|----------------|----------------------|-----------------------|--|----------------|-------------------|-----------------------|---|
| NAME OF THE LECTURER: <u>S.R. Tejawari</u> |                 |                 |   |  | CLASS: <u>eluru</u> |                | Semester: <u>III</u> |                       | Paper: <u>eluru - A2</u> <i>Instrumental methods of Analysis</i> |                |                   |                       |   |
| MONTH                                      | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY |                |                      |                       | CO- CURRICULAR ACTIVITY  |                |                   |                       |   |
|  |                 |                 |   |  | Activity Conducted  | Hours Allotted | Whether Conducted    | If not Alternate Date | Activity Conducted   | Hours Allotted | Whether Conducted | If not Alternate Date |   |
|  | 4 <sup>th</sup> | 4 hrs           | selection & Interpretation.<br>NMR spectroscopy - principle, Instrumentation. | -  | will be shown PPT's | -              | -                    | -                     | -  | -              | -                 | -                     | - |
|  |                 |                 |   |  |                     |                |                      |                       |  |                |                   |                       |   |
| July                                       | 1 <sup>st</sup> | 4 hrs           | chemical shift & factors, spin coupling Applications                          | -  | -                   | -              | -                    | -                     | -  | -              | -                 | -                     | - |
|  |                 |                 |   |  |                     |                |                      |                       |  |                |                   |                       |   |
|  |                 |                 |   |  |                     |                |                      |                       |  |                |                   |                       |   |
|  |                 |                 |   |  |                     |                |                      |                       |  |                |                   |                       |   |
|  |                 |                 |   |  |                     |                |                      |                       |  |                |                   |                       |   |

Signature of the Lecturer  
S.R. Teja

Signature of the HOD  
Ba

Signature of the Principal  
Beliga



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2019 - 2020**

| ANNUAL CURRICULAR                            |                 |                 |   |  | PLAN (Year)   |                |                   |                       |   |                |                   |                       |   |
|--|-----------------|-----------------|---|--|---|----------------|-------------------|-----------------------|---|----------------|-------------------|-----------------------|---|
| NAMR OF THE LECTURER <u>P. RAMYA KRISHNA</u> |                 |                 |   |  | CLASS: <u>III BSC - cluster</u> Semester: <u>VI</u> |                |                   |                       | Paper: <u>Analysis of Drugs, Foods &amp; Biochemical Analysis</u> |                |                   |                       |   |
| MONTH  | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC   | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY                                 |                |                   |                       | CO-CURRICULAR ACTIVITY  |                |                   |                       |   |
|  |                 |                 |   |  | Activity Conducted                                  | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted  | Hours Allotted | Whether Conducted | If not Alternate Date |   |
| Apr  | 2 <sup>nd</sup> | 4               | <u>unit 1</u><br>Analysis of Aspirin, Paracetamol and Analysis of chloroquine | -  | -   | -              | -                 | -                     | -   | -              | -                 | -                     | - |
|  | 3 <sup>rd</sup> | 4               | Analysis of Amoxicillin and Penicillin,                                       | -  | -   | -              | -                 | -                     | -   | -              | -                 | -                     | - |
|  |                 |                 | Analysis of Isoniazid   | -  | -   | -              | -                 | -                     | -   | -              | -                 | -                     | - |
|  | 4 <sup>th</sup> | 3               | <u>unit 2</u><br>Analysis of Allegra, cetofine and zine                       | -  | -   | -              | -                 | -                     | -   | -              | -                 | -                     | - |
|  |                 |                 | Analysis of Tozadone  | -  | -   | -              | -                 | -                     | -   | -              | -                 | -                     | - |
| may  | 1 <sup>st</sup> | 4               | Analysis of Tozadone, loxazepam.  | -  | student seminar                                     | 01             | yes               | -                     | student seminar   | 01             | yes.              | -                     | - |

P. Ramya  
Signature of the Lecturer

Signature of the HOD Ban

Signature of the Principal [Signature]



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2019-2020**

| ANNUAL CURRICULAR                      |      |                 |  |  | PLAN (Year)            |                |                   |                       |                        |                |  |                       |   |  |
|--|------|-----------------|--|--|------------------------|----------------|-------------------|-----------------------|------------------------|----------------|--|-----------------------|---|--|
| NAMR OF THE LECTURER: P. RAMYA KRISHNA |      |                 |  |  | CLASS: III BSC-CLUSTER |                |                   |                       | Semester: VI           |                | Paper: Analysis of Drugs, Foods & Biochemical Analysis |                       |   |  |
| MONTH                                  | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | CURRICULAR ACTIVITY    |                |                   |                       | CO-CURRICULAR ACTIVITY |                |  |                       |   |  |
|  |      |                 |  |  | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted                                      | If not Alternate Date |   |  |
|  |      |                 | Analysis of ambien and diazepam  | -  | -                      | -              | -                 | -                     | -                      | -              | -  | -                     | - |  |
|  | 2nd  | 4               | Analysis of anti epileptic and anticonvulsant drugs like phenobarbitor & phenacemide | -  | -                      | -              | -                 | -                     | -                      | -              | -  | -                     | - |  |
|  | 3rd  | 4               | Analysis of Cardiovascular drugs like atenolol, norevasc, lipitor and furosemide     | -  | -                      | -              | -                 | -                     | -                      | -              | -  | -                     | - |  |
|  |      |                 | debate   | -  | 01                     | yes            | -                 | -                     | -                      | -              | -  | -                     | - |  |
|  | 4th  | 4               | Analysis of pirovacid and slip tests   | Remedial class                                   | -                      | -              | -                 | -                     | -                      | -              | -  | -                     | - |  |

*P. Ramya*  
Signature of the Lecturer

*Ban*  
Signature of the HOD

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Signature of the Principal



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2019-2020**

| ANNUAL CURRICULAR    |                 |                 |  |  | PLAN (Year)                |                |                   |                       |                        |                |                   |                       |
|----------------------|-----------------|-----------------|--|--|----------------------------|----------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|
| NAMR OF THE LECTURER |                 |                 |  |  | CURRICULAR ACTIVITY        |                |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |
| MONTH                | WEEK            | HOURS AVAILABLE | SYLLABUS/ TOPIC  | Additional Input/Value Addition Provided/ Taught | Activity Conducted         | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |
| June                 | 1 <sup>st</sup> | 4               | clinical analysis and composition of Blood.                    | -  | Group Discussion           | 01             | yes               | -                     | -                      | -              | -                 | -                     |
|                      |                 |                 |  | different Blood Groupings                        | -                          | 01             | yes               | -                     | -                      | -              | -                 | -                     |
|                      | 2 <sup>nd</sup> | 4               | Trace elements in the body                                     | -  | will be shown PPT'S.       | -              | -                 | -                     | -                      | -              | -                 | -                     |
|                      | 3 <sup>rd</sup> | 4               | Estimation of blood Glucose & Blood cholesterol                | -  | -                          | -              | -                 | -                     | -                      | -              | -                 | -                     |
|                      | 4 <sup>th</sup> | 4               | Analysis of milk and milk products, acidity, total solids, fat | Analysis of milk acidity demonstration           | Analysis of casein in milk | 01             | yes               | -                     | -                      | -              | -                 | -                     |
|                      |                 |                 |  | -  | Quiz                       | 01             | yes               | -                     | Quiz                   | 01             | yes               | -                     |

*P. Ramya Krishna*  
 Signature of the Lecturer

Signature of the HOD *B. An*

Signature of the Principal

*Seliga*



**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**  
**CURRICULUM LECTURER WISE 2019-2020**

| ANNUAL CURRICULAR    |      |                 |  |  | PLAN (Year)                             |                |                   |                       | CO-CURRICULAR ACTIVITY |                |                   |                       |
|----------------------|------|-----------------|--|--|---|----------------|-------------------|-----------------------|------------------------|----------------|-------------------|-----------------------|
| NAMR OF THE LECTURER |      |                 |  |  | CLASS                                   |                |                   |                       | Paper                  |                |                   |                       |
| MONTH                | WEEK | HOURS AVAILABLE | SYLLABUS/ TOPIC                                | Additional Input/Value Addition Provided/ Taught | Activity Conducted                      | Hours Allotted | Whether Conducted | If not Alternate Date | Activity Conducted     | Hours Allotted | Whether Conducted | If not Alternate Date |
| July                 | 1st  | 4               | Analysis of proteins, lactose                  | percentage of lactose calculation                | Lactose % experiment & it's calculation | 02             | yes               | -                     | -                      | -              | -                 | -                     |
|                      |      |                 | phosphatase activity casein and chloride       | -  | -                                       | -              | -                 | -                     | -                      | -              | -                 | -                     |
|                      | 2nd  | 4               | Analysis of food materials                     | -  | -                                       | -              | -                 | -                     | -                      | -              | -                 | -                     |
|                      |      |                 | preservatives colouring matters                | -  | will be shown preservatives ppt's.      | -              | -                 | -                     | -                      | -              | -                 | -                     |
|                      | 3rd  | 4               | Adulterants in rice, wheat                     | project work on milk and                         | -                                       | -              | -                 | -                     | -                      | -              | -                 | -                     |
|                      |      |                 | wheat flour, coconut oil, coffee powder & milk | milk products                                    | -                                       | -              | -                 | -                     | -                      | -              | -                 | -                     |

cluster - A3  
 Analysis of Drugs, Foods & Biochemical Analysis

*P. Ramya*  
 Signature of the Lecturer

Signature of the HOD *BA*

Signature of the Principal *[Signature]*