

# DEPARTMENT OF BOTANY

## COURSE CURRICULUM & MARKING SCHEME

### Ph.D. Course Work

SESSION : 2024-25



ESTD: 1958

## GOVT. V.Y.T. PG AUTONOMOUS COLLEGE, DURG, 491001 (C.G.)

(Former Name – Govt. Arts & Science College, Durg)

NAAC Accredited Grade A<sup>+</sup>, College with CPE - Phase III (UGC), STAR COLLEGE (DBT)

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**GOVT. V.Y.T. PG AUTONOMOUS COLLEGE, DURG (C.G.)**

**DEPARTMENT OF BOTANY**

**Session: 2024-2025**

**Syllabus for Ph.D. Course Work in Botany**

**There will be two papers; one each with 100 maximum marks**

Paper-I: Research methodology, Advance Tools & Techniques, Quantitative Data Analyses and Computer Fundamentals, Taxonomic & Ecological Data Analysis.



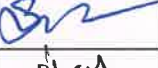









Paper-II: Review of Literature & Seminar

| <b>Paper-I Research methodology, Advance Tools &amp; Techniques, Quantitative Data Analyses and Computer Fundamentals, Taxonomic &amp; Ecological Data Analysis.</b> |   | <b>Maximum Marks</b> |
|--|---|----------------------|
| <b>A</b>   | Research Methodology Essential steps in research; Identification, Selection of objectives, Research design: - Components, Importance of literature collection, Citation & indexing. Research ethics, IPR, Research report Presentation-table, Figure, Formatting and typing   | 25.0                 |
| <b>B</b>   | Advanced Tools & Techniques Advanced microscopy-confocal phase contrast & electron microscopy, Electrophoresis, HPLC, PCR, DNA & Protein sequencing, spectrophotometry.   | 25.0                 |
| <b>C</b>   | Quantitative Data Analysis and Computer Fundamentals Standard deviation, standard error, coefficient of variation, correlation & regression, t-test, frequency distribution. Computer Application Software for biostatistics, SPSS, COSTAT, MS WORD, MS EXCEL, MS Power Point | 25.0                 |
| <b>D</b>   | Taxonomic & Ecological Data Analysis Morphological basis of plant identification, Taxonomy in relation to cytology & Biochemistry, Environmental sampling methodology. Isolation, preservation & Identification of microorganisms.  | 25.0                 |

| Paper-II Review of Literature & Seminar |  | Maximum Marks |
|---|--|---------------|
| A                                       | Review of Literature – Writing review of literature in the area of the proposed Ph.D. program. | 50.0          |
|   | Seminar – Based on the review of literature.   | 50.0          |

Note : 1. There will be FOUR units (A,B,C & D) of 25 marks. The pattern will include both objective (multiple-choice questions) and objective (Short answer, using 50 to 100 words) questions. 2. The candidate must be obtained 50% or more marks to qualify in the course work. The answer paper will be assessed independently by two examiners.

#### Name and Signatures of Members Board of Studies

| S. No. | Category                                  | Name of Nominated Members   | Signature   |
|--------|---|---|---|
| 1.     | Chairperson                               | Dr. Ranjana Shrivastava   |   |
| 2.     | Members                                   | 1. Dr. G. S. Thakur   |   |
|        |   | 2. Dr. Shriram Kunjam   |  |
|        |   | 3. Dr. Satish Kumar Sen   |  |
|        |   | 4. Dr. Vijay Laxmi Naidu  |  |
|        |   | 5. Mr. Motiram Sahu   |  |
|        |   | 6. Dr. Rajeshwari Prabha Lahare   |  |
| 3.     | Subject specialist                        | 1. Prof. P.C. Panda Retd. Professor Borsi Durg C.G.)                                  |  |
|        |   | 2. Dr. N.B. Singh (Govt. N.PG. Science College Raipur C.G.)                           |  |
| 4.     | VC Nominated member                       | Dr. Aruna Shrivastava (Govt. D.B. Girls PG College Raipur C.G.)                       |  |
| 5.     | Corporate/ Industrial area Representative | Shri Manish Jain (Apollo College, Durg C.G.)  |  |
| 6.     | Ex Meritorious Student PG                 | Tanu Verma  |  |
| 7.     | Subject expert from other Department      | Dr. Divya Minz (Department of Zoology, Govt. V.Y.T. PG. Autonomous College Durg C.G.) |  |