

## Syllabus for PhD Course Work in Botany (2011-12)

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

Paper-I	Research methodology, Advance Tools & Techniques, Quantitative Data Analyses and Computer Fundamentals, Taxonomic & Ecological Data Analysis.	Maximum Marks
A	<b>Research methodology</b> 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>Advanced Tools &amp; Techniques</b> Advanced microscopy-confocal phase contrast & electron microscopy. Electrophoresis, HPLC, PCR, DNA & Protein sequencing, spectrophotometry.	25.0
C	<b>Quantitative Data Analysis and Computer Fundamentals</b> Standard deviation, standard error, coefficient of variation, correlation & regression, t-test, frequency distribution. <b>Computer Applications</b> Softwares for biostatistics, SPSS, COSTAT, MS WORD, MS EXCEL, MS Power point	25.0
D	<b>Taxonomic &amp; Ecological Data Analysis</b> Morphological basis of plant Identification, Taxonomy in relation to cytology & Biochemistry. Environmental sampling methodology. Isolation, preservation & Identification of micro organisms.	25.0
<b>Paper –II Review of Literature &amp; Seminar</b>		<b>Maximum Marks</b>
A	<b>Review of Literature- Writing review of literature in the area of the proposed Ph.D program.</b>	50.0
	<b>Seminar-Based on the review of literature</b>	50.0

Note:

- There will be FOUR units (A, B, C & D) of 25 marks each. The pattern will include both objective (multiple-choice questions) and objective (short answer, using 50 to 100 words) questions.
- 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.



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3/12/11  
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