

School of Studies in Biotechnology

Pt. Ravishankar Shukla University Raipur (C.G.)

Syllabus for PhD Course Work in Biotechnology (2011-12)

One Semester

There are Two papers; each with 100 maximum marks.

Paper-I Research Methodology, Advance Tools & Techniques, Quantitative Data Analyses and Computer Fundamentals

Paper-II Review of Literature & Seminar

Paper-I: Research Methodology, Advanced Tools & Techniques, Quantitative Data Analyses and Computer Fundamentals		Maximum Marks
A	Research methodology Essential steps in research: Identification, Selection of objectives, Research design: - components, importance of literature collection, citation & indexing. Research ethics, IPR, Experimental error and control, Research report Presentation – table, Figure, Formatting and typing.	25.0
B	Advanced Tools & Techniques Electrophoresis, HPLC, Microscopy, PCR, Biosensors: Types, Application of biosensor, Protein sequencing, DNA sequencing, Radioisotope Techniques	25.0
C	Quantitative Data Analyses Measures of variability: Standard Deviation, Standard Error, Coefficient of Variation, Correlation and Regression, Test of Significant: t-test, chi-square test, Frequency distribution: Binomial and normal distribution.	25.0
D	Computer Fundamentals Computer Application, Application of software, Internet and Biotechnology Fundamental of Bioinformatics, Biological databases and Biotechnology	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
B	Seminar – Based on the review of literature	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 obtain 50% or more marks to qualify in the course work. The answer paper will be assessed independently by two examiners.