

**Dr. D. Y. Patil Vidyapeeth, Pune**

**Pattern for Pre-Ph. D. Examination for the faculties of**

**Medicine, Dentistry, Biotechnology & Bioinformatics, Nursing,  
Allied Medical Science (Physiotherapy), Ayurved, Homoeopathic**

<b>Paper I</b>	<b>Research Methodology &amp; Biostatistics</b> No of total Questions - 10 (5 Questions on Research Methodology and 5 Questions on Biostatistics) Each Questions carries 5 marks	<b>Total Marks - 50</b>
<b>Paper II</b>	<b>Recent advances in the concerned speciality</b> No of total Questions - 10 Each Questions carries 5 marks	<b>Total Marks - 50</b>
<b>Paper III</b>	<b>Presentation &amp; Discussion</b> (Relevant to the Research topic for Ph. D.)	<b>Total Marks - 50</b>

## **Dr. D. Y. Patil Vidyapeeth, Pune**

The following pattern of Pre-Ph.D. Examination of the Faculty of Medicine

**Paper I                      Research Methodology & Biostatistics                      50 Marks**

**Section - A                      Research Methodology                      (5 Question – 5 Marks each)**

Sr. No.	Topic
1	Introduction to research methodology in medical practice and the research question
2	Concept of populations and samples
3	Fundamental principles of measurements and data management
4	Ethical issues in clinical research
5	Architecture of Research Designs
6	(a) Descriptive and cross sectional studies (b) Case control studies
7	(a) Cohort studies (b) Randomized controlled trials
8	Methods of Data Collection
9	Data Interpretation
10	Writing the research protocol
11	Critical appraisal of a journal articles relevant to the proposed topic
12	Presentation and publishing a research article

**Section B****Biostatistics****(5 Question – 5 Marks each)**

Sr. No.	Topic
1	Measures of disease frequency
2	Measures of effect and association
3	Estimation and hypothesis testing including tests of Significance( Chi-square, t-tests, ANOVA, Non parametric tests)
4	The concept of confidence intervals
5	Sample size and sampling
6	SPSS/SAS/Stata/Epi Info applications
7	Measurement errors, reliability, validity and bias
8	Confounding and measures to deal with it (matching, stratified analysis and multivariate analysis)
9	Study of diagnostic tests (Sensitivity, specificity, ROC curve, Bays' theorem)

(Paper to be set by the H. O. D. of Community Medicine or a person nominated by the University)

**Paper – II** Recent advances in the concerned speciality

**50 Marks**

(10 Questions of 5 Marks each)

(Paper to be set by the concerned H.O.D. or a person nominated by the University)

**Paper – III** Presentation & Discussion (Relevant to the Research topic for Ph. D.)

**50 Marks**