

## Schedule of Ph.D. Coursework Exam

### Schedule of exams:

Date of exam	Paper	Subject	Duration	Time	Total Marks	Pass Marks
25 <sup>th</sup> March, 2019	Paper-I	Research Methodology- I	3 hours	10:00 am to 1:00 pm	100	50
26 <sup>th</sup> March, 2019	Paper-II	Research Methodology-II	3 hours	10:00 am to 1:00 pm	100	50

### Note:

1. The exam is only for those candidates who have completed the research methodology workshops held in two phases *i.e.* 17 December, 2018 to 22 December 2018 (Phase-I), and 28 January, 2019 to 02 February, 2019 (Phase-II).
2. All candidates are instructed to bring their registration cards while appearing in the exams.

### Venue of Exams:

The papers will held at **University Center of Excellence in Research, Academic Block,** Baba Farid University of Health Sciences, Faridkot.

### Format of exam:

**The paper-I and Paper-II will be for 100 marks each. The format of the exam will be as follows:**

- Section-A will comprise of 10 multiple choice questions of 2 marks each and it will be compulsory to attempt all questions.
- Section-B will comprise of 10 short answer questions of 3 marks each and it will be compulsory to attempt all questions.
- Section-C will comprise of 7 questions of 5 marks each. Candidates need to attempt only 6 questions.
- Section-D will comprise of 3 questions of 10 marks each. Candidates need to attempt only 2 questions.

### Syllabus of Exams:

#### **Paper-I (Research Methodology-I)**

- Introduction to Research methodology and Biostatistics
- Overview of Research and its types and components
- Quantitative Research versus Qualitative research
- Qualitative Research designs
- Experimental Research Designs : True versus Quasi Experimental
- Research Question and hypothesis/ Assumptions
- Salient features of developing research proposal
- Developing Conceptual Framework/models for research study
- Samples and Sampling Techniques
- Determining Sample Size
- Techniques of data collection
- Data Concepts: Types, Expressions, Presentation and Examples /Basic Statistics: Descriptive and inferential
- Strategies for analysing data
- Designing research Tools

- Use of Statistical Packages for data analysis
- Components of research writing
- Writing style of thesis : example of a good thesis
- Types and layouts of research reports
- Review and research articles designing and writing research report for publication
- Technical problems in report/ thesis writing
- Plagiarism and serious concerns
- Research funding schemes
- Applying for funding schemes
- Evaluation of research report and technical errors in project proposal

### **Paper-II (Research Methodology-II)**

- Introduction to Clinical Research
- Overview of New Drug development
- Tragedies in Clinical Research
- Phases in clinical trials (I,II,III)
- Scope and bottlenecks in clinical trials
- Biostatistics in Clinical Trials
- QA and QC in Clinical laboratories/drug manufacturing
- Pharmaceutical Industry Frauds
- Essential document in clinical trials
- Role of Pharmacovigilance in clinical research Clinical trials
- IEC/IRB duties and responsibilities
- Perspectives in Clinical Research
- ICH guidelines (Good Clinical Practices)
- Informed Consent/Patient rights
- Filing of INDA and NDA and Documents required for INDA and NDA
- Adverse drug reaction and monitoring, Reporting of adverse drug Reaction
- Data management in clinical trials (I,II,III)
- Intellectual Property Rights
- Patent, copyrights, trademarks
- Cross-sectional / Time-series
- Case Control/Cohort Studies
- Information retrieval in health sciences and search engines
- Ethical consideration in health sciences research