

Ph.D. IN BIOCHEMISTRY (PHDBC)

Term-End Examination

00261

December, 2017

**RBC-001 : RESEARCH METHODOLOGY,
BIOETHICS AND IPR**

Time : 3 hours

Maximum Marks : 100

Note : The question paper consists of two sections, Section A and Section B.

SECTION A

Attempt all the questions.

1. Give full forms of the following abbreviations : $6 \times 1 = 6$
 - (a) RCGM
 - (b) CBD
 - (c) GATT
 - (d) GMO
 - (e) PCT
 - (f) TRIPS

2. Define the following terms : $5 \times 2 = 10$
 - (a) Research Design
 - (b) Plagiarism
 - (c) LMOs
 - (d) Biosecurity
 - (e) Copyright

3. Choose the correct answer from the given options : **4×1=4**

- (a) To be patented, an invention must be
- (i) Non-obvious
 - (ii) Useful
 - (iii) Novel
 - (iv) All of the above
- (b) In India, the literary work is protected until
- (i) Lifetime of the author
 - (ii) 25 years after the death of the author
 - (iii) 40 years after the death of the author
 - (iv) 60 years after the death of the author
- (c) Research is
- (i) Searching again and again
 - (ii) Finding solution to any problem
 - (iii) Working in a scientific way to search for the truth of any problem
 - (iv) None of the above
- (d) Which of the following pacts is related to patenting of micro-organisms ?
- (i) Paris Convention
 - (ii) Patent Cooperation Treaty
 - (iii) Budapest Treaty
 - (iv) IT Act, 2000

SECTION B

Attempt any four questions :

4. (a) Distinguish between Research methods and Research methodology. 10
- (b) What is the need of ethics in biological research ? Discuss with suitable examples. 10
5. (a) Explain the following research designs : 10
- (i) Randomized Block Design
- (ii) Latin Square Design
- (b) Write a short note on "The Concept of Laboratory Biosecurity". 10
6. How would you determine a sample design ? Discuss about any four sample designs. 20
7. Why do we need Plant Variety Protection (PVP) rights ? Discuss various types of rights mentioned under PVP. What are the salient features required for a plant to be protected ? 20
8. Write short notes on the following :
- (a) Concept of Novelty and Inventive Step in Patenting 10
- (b) Role of Institutional Ethics Committee 10
9. (a) How will you formulate an experimental hypothesis ? Discuss with suitable examples. 10
- (b) Explain the mechanics of writing a research report. 10