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RBC-001

Ph. D. IN BIOCHEMISTRY (PHDBC)

Term-End Examination

December, 2022

RBC-001 : RESEARCH METHODOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : (i) *Question No. 1 is compulsory.*

(ii) *Attempt any **four** questions from
Q. Nos. 2 to 7.*

1. Explain the following in 2-3 sentences each :
2 each
- (a) Empirical research
 - (b) Biocontainment
 - (c) Technique
 - (d) Copyright
 - (e) Biohazard
 - (f) Novelty
 - (g) Data
 - (h) Hypothesis
 - (i) Biosecurity
 - (j) Questionnaire

P. T. O.

2. (a) Discuss the various steps involved in defining a research problem. 10
- (b) Explain any *five* concepts related to research design. 10
3. What is the difference between “before-and-after without control design” and “before-and-after with control design” ? 20
4. (a) Randomised block design is an improvement over the C. R. design. Explain. 10
- (b) Differentiate between systematic sampling and stratified sampling. 10
5. Explain PHBA. Classify them into various biosafety levels giving examples. 20
6. (a) What are the types of inventions which are not patentable in India ? 10
- (b) What does the term “Geographical Indications” (GI) stand for ? What are the objectives of Protection of Plant Varieties and Farmers’ Rights Act in India ? 10

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7. Write short notes on the following : 5 each

- (a) Bioethics
- (b) Concept of inventive step
- (c) Application of GMO in food and agriculture
- (d) Bioterrorism