

No. of Printed Pages : 3

RBC-001

Ph. D. IN BIOCHEMISTRY (PHDBC)

Term-End Examination

December, 2024

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 : $10 \times 2 = 20$

- (a) Patents
- (b) Biosafety
- (c) Ethics
- (d) Sample
- (e) Copyright
- (f) Case study
- (g) Observation
- (h) Error

- (i) Hypothesis
 - (j) Applied Research
2. With the help of a suitable example, explain the research design in case of exploratory and diagnostic research studies. 20
3. (a) Explain the principle of replication and principle of local control of experimental design. 10
- (b) Differentiate between informal experimental design and formal experimental design. 10
4. (a) Describe an experimental design very frequently used in agricultural research. 10
- (b) Distinguish between primary and secondary data. 10
5. (a) Explain the role of Institutional Ethics Committee. 10
- (b) Describe various types of biological safety cabinets used in research. 10

[3]

6. What are Intellectual Property Rights (IPRs) ?
Discuss the need of IPRs in biotechnology. 20
7. Write short notes on the following : 4×5=20
- (a) Concept of novelty
 - (b) Types of patents
 - (c) EPA and Regulatory Committees of GoI
 - (d) GMO

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