

**Ph. D. IN ENVIRONMENTAL  
SCIENCE (PHDEV)**

**Term-End Examination  
December, 2025**

**REV-002 : RESEARCH METHODOLOGY-II**

*Time : 3 Hours*

*Maximum Marks : 100*

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**Note :** (i) Answer any **five** questions.

(ii) All questions carry equal marks.

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1. How do descriptive statistics and statistical analysis differ ? What is the significance of each of them in the context of Ph. D. research ? Describe the role of central tendency in summarizing research data. 20
2. Explain the process of formulating research objectives and designing instrumentation technique. How does a well-defined set of objectives impact the selection of relevant research methods and instruments for data collection ? 20

3. Explain the role of Intellectual Property Rights in research and development. How can a Ph. D. scholar protect their research findings ? What is its significance for the future application ? 20
4. What is the role of computers in research work ? Explain with suitable examples. 20
5. (a) What are the basic concepts in writing a research paper ? Explain. 10  
(b) What do you mean by interpretation and generalization ? 10
6. Explain the significance of literature review and bibliography in a research report. 20
7. Explain the concept of Analysis of Variance (ANOVA). When and why would a researcher use it ? What is the significance of this method to validate the result ? 20

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