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RDR-104

**Ph. D. IN DAIRY SCIENCE AND
TECHNOLOGY (PHDDR)**

Term-End Examination

Dec., 2021

RDR-104 : RESEARCH METHODOLOGY

Time : 3 Hours

Maximum Marks : 100

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

(ii) All questions carry equal marks.

1. (a) Define scientific research. What are the important characteristics of scientific research ? 10
- (b) What do you understand by the problem in research ? Explain the conditions that specify the existence of problem. 10
2. (a) Define Research Design. Describe the different phases of research design. 10
- (b) Discuss about Latin Square Design (LSD) with a suitable example. 10
3. (a) Define technology transfer. Describe the process of technology transfer with a suitable example. 10
- (b) Discuss in detail the essential components of a research proposal. 10
4. (a) Define ethics in research. Discuss any *eight* principles and their importance in research. 10
- (b) Differentiate between Copyright and Patent. List the criteria which an invention should meet to get a patent. 10
5. (a) Describe the concept of impact factor and citation index. 10
- (b) Define problem statement. Explain the features of a good problem statement. 10
6. (a) Explain the terms concept, construct and variable. Discuss the types of variables. 10
- (b) Define Hypothesis. Explain the types of hypothesis along with the examples. 10

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7. (a) Discuss the criteria for good hypothesis and utilities of hypothesis. 10
- (b) Discuss about the instruments used for collecting primary data. 10
8. Define experimental research design. Explain the types of experimental research design. 20