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Department of Research & Development
Mid - Term Examinations - SEPTEMBER 2024

Odd Semester: Ph.D. Course Work	Date: 28 /09/2024
Course Code: RES 805	Time: 10:00am – 11:30am
Course Name: Research Methodology and Publication Ethics for Sciences	Max Marks: 50
Department: Physics	Weightage: 25%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 5 marks.		4Qx5M=20M
1	What are the essential features that characterize a research study?	5 Marks
2	Differentiate descriptive and analytical research.	5 Marks
3	What is the Poisson distribution, and how is it used in research applications?	5 Marks
4	What is the difference between correlation and regression analysis, and how are they applied in research methodology? Provide an example.	5 Marks

Part B

Answer ALL Questions. Each question carries 15 marks.		2QX15M=30M
5	Rearrange the following steps of quantitative research in the correct order and provide an explanation for each step A) Analyze data B) Hypothesis C) Process Data D) Findings E) Research Design F) Data collection	15 Marks
6	What is the concept of probability theory in statistical mechanics, and what role does it play in research methodology? How does probability theory aid in the design and analysis of experiments?	15 Marks