

## INDIRA UNIVERSITY, PUNE

SCHOOL OF INFORMATION TECHNOLOGY- M.SC (CS)

Term End Examination (2025 Pattern) December – 2025 - Semester – I

Subject Name: Research Methodology  
Subject Code: 25PSC119T

Max. Marks: 50  
Time: 2:30 Hrs.

**Instructions**

- All Questions are Compulsory.

CO #	Cognitive Ability	Course Outcome
CO1	Remember	Recall and describe key concepts of research methodology.
CO2	Understand	Explain the scientific method and research techniques.
CO3	Apply	Formulate research problems, objectives, and hypotheses, Implement ethical data collection techniques from diverse sources.

<b>Q1.</b>	<b>Attempt any 5 out of 7. (2 mark each)</b>	<b>(10 Marks)</b>	<b>CO1</b>
a)	Define Sampling		
b)	What do you mean by data collection?		
c)	How T test is used in research?		
d)	What is descriptive analysis?		
e)	What are the types of validity threat		
f)	What do you mean by research problem		
g)	List types of Data analysis in research field		
<b>Q2.</b>	<b>Attempt any 4 out of 6 (5 marks each)</b>	<b>(20 Marks)</b>	<b>CO2</b>
a)	What do you mean by qualitative research? Explain its advantages and limitations		
b)	Explain the significance of a literature review in the research process.		
c)	What do you mean by Empirical research? Explain its advantages and limitations		
d)	Explain the importance of Peer review in research field		

e)	Explain the role of reviewer and publisher in research process. Analyze its importance in research area	
f)	Identify different study designs which are applicable in survey?	
<b>Q.3. Attempt any 2 out of 3 questions. (5 marks each) (10 Marks) CO3</b>		
a)	Identify different methods of data collection along with its meaning	
b)	Explain the concept of hypothesis testing. Identify its importance	
c)	Discover how can researchers ensure that their findings are generalizable to a larger population? Explain the importance of sample size and selection methods in this context.	
<b>Q.4 Compulsory question. (10 marks each) (10 marks) CO3</b>		
	<p>A retail company, Shop Ease, wanted to understand customer satisfaction levels with its online shopping experience. The company noticed a slight decline in repeat customers over the past six months and decided to conduct a data-driven analysis to identify the root causes.</p> <p>Solve the case based on following parameters.</p> <p>A) No of data collected  B) Apply different data analysis methods  C) Write down the findings based on data</p>	

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