Reg. No.:	
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Question Paper Code: 53961

Ph.D. COURSE WORK EXAMINATION, DECEMBER 2015

Elective

Technology 15PPH113 - RESEARCH METHODOLOGY (Regulation 2015) **Duration: Three hours** Maximum: 100 Marks **Answer ALL Questions** $(5 \times 20 = 100 \text{ Marks})$ 1. (a) (i) Discuss about the concept of applied and basic research. (12)(ii) Briefly explain about quantitative and qualitative research techniques. (8) Or (b) (i) Explain in detail about hypothesis development. (10)(ii) Briefly explain about hypothesis testing with quantitative data. (10)2. (a) What is the importance of laboratory and field experiments and briefly explain about internal and external validity. (20)Or (b) Write short notes on (i) Rating scale and attitudinal scales (8) (ii) Validity testing of scales (8) (iii) Stability measures. (4) 3. (a) List the types of data collection methods and explain any three methods in detail. (20)

	(b)	(i) Briefly explain about sampling techniques and give the advantages disadvantages of probabilistic samples.	and (10)
		(ii) With a practical example explain the determination of optimal sample size. ((10)
4.	(a)	Explain in detail about	
		(i) Factor analysis	(6)
		(ii) Cluster analysis	(7)
		(iii) Discriminant analysis.	(7)
		Or	
	(b)	With a help of a case study explain canonical correlation.	(20)
5.	(a)	Explain the importance of written report and write short notes on integral parts report.	of a
		Or	
	(b)	Write a sample result and discussion part for a research work you are pursuing. ((20)
			