

20RM601T					Research Methodology					
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
1	0	0	1	1	25	50	25	--	--	100

**COURSE OBJECTIVES**

- To expose the students to the basic elements of research.
- To teach students the basic mathematical and statistical tools available for research.
- To help develop research aptitude in students.
- To be able to select and define appropriate research problem and parameters.

**UNIT 1 : PRIMARY RESEARCH****6 Hrs.**

Conducting Primary Research: Definition and characteristics of research. Different types of research, Steps in research, Identification, selection and formulation of research problems, Details about research questions, interviews, surveys, observations, and analysis research. Formulation of hypothesis, Review of Literature.

**UNIT 2 : RESEARCH TOOLS****7 Hrs.**

Sampling techniques, sampling theory, types of sampling, sampling and non-sampling error, sample size, advantages and limitation of sampling, collection of data, primary data, meaning, data collection method, secondary data, meaning, relevance, limitations and cautions. Statistics in research, measures of central tendency, dispersion, skewness and kurtosis in research, hypothesis, fundamentals of hypothesis testing, standard error, point and interval estimates, important non-parametric tests, Testing of significance, mean, proportion, variance and correlation-testing for significance of difference between means, proportions, variances and correlation co-efficient, Chi-Square tests- Anova-One way and Two way, Research Report writing.

**COURSE OUTCOMES**

On completion of the course, student will be able to

CO1-- understand some basic concepts of research and its methodologies.

CO2 – identify appropriate research topic

CO3 – select and define appropriate research problem and parameters.

CO4 – prepare a project proposal.

CO5 – write a research report and thesis

CO6 – organize and conduct research (advanced project) in a more appropriate manner

**TEXT/REFERENCE BOOKS**

1. C.R. Kothari, Gaurav Garg, Research Methodology: Methods and techniques, 4<sup>th</sup> ed., New Age International Publishers, 2019.
2. E. Bright Wilson Jr. , An Introduction to Scientific Research, 3<sup>rd</sup> ed., Dover Publication, 1990.