

**Syllabus of Entrance examination (written) for admission to**  
**Ph.D. programme in Mathematics**

**Date of Examination:** 20<sup>th</sup> December 2017

**Reporting Time:** 10 AM

**Time of Examination:** 10.30 AM

**Venue:** School of Mathematics, Shri Mata Vaishno Devi University, Katra-182320, J&K

**Mathematics (50%)**

Abstract algebra, Topology, Real analysis, Functional analysis, Complex analysis, Geometry, Linear algebra, Differential equations, Probability & statistics, Operational Research.

**Research Methodology (50%)**

Research Processes, Types of Research, Designing of Research. Types of data and various methods of collecting data, Questionnaire construction, Attitude Measurement, Coding, editing and tabulation of data, Presentation of Data, Measures of Central tendency, Measures of variation and Skewness, Sampling: Theory and designing, Sampling methods and planning, sampling Distribution. Hypothesis testing, Chi Square Testing, Probability and Probability Distribution: Basic Concepts of probability, discrete probability Distributions, Continuous Probability Distribution, Correlation, Regression, Time Series Analysis.