## **Faculty Profile**

Name: Dr. Shivani Rai Designation: Assistant Professor Teaching Areas: Mathematics, Quantitative Methods, Probability and Statistics, Operations Research, Numerical Aptitude & Reasoning. Qualification: Ph. D ( Mathematics) NESLET (Mathematical Sciences) GATE (Mathematical Sciences) M.Sc (Mathematics)



B.Ed

**Research Achievements:** Recipient of the Best Paper Award at the International Conference on Discrete Mathematics (ICDM-2023), organized by Vidhyavardhaka College of Engineering, Mysuru. A member of the organizing committee of the International Conference in Nonlinear Dynamics and Applications (ICNDA-2022), Department of Mathematics, SMIT.

## **Research Publications:**

1 . On the First and Second Zagreb Indices of Some Products of Signed Graphs, AKCE International Journal of Graphs and Combinatorics, Vol. 20, 2023- Issue 2, (2023), Publisher: Taylor & Francis [Indexed in SCIE, Q2, Impact Factor:1.0 (2023)]

2. Extremal Topological Indices of Some Nanostructures", in Heliyon, Vol. 9, Issue 11, (2023) Publisher: Elsevier [Indexed in SCIE, Q1, Impact Factor: 4.0 (2023)].

3. Some Bounds of the Neighborhood Versions of Banhatti-Sombor Index and Modified Sombor Index, Proceedings of the International Conference on Mathematical Sciences and Applications (ICMSA-2023), Taylor & Francis.

4. Chemical Significance of Some Neighborhood Degree-based Molecular Descriptors, Proceedings of the International Conference on Nonlinear Dynamics and Applications (ICNDA-2024), Springer.

## **Accepted Papers:**

 Study of Bounds of Some Neighborhood Degree-based Molecular Descriptors and their Chemical Significance Using Machine Learning Approach, AKCE International Journal of Graphs and Combinatorics, Publisher: Taylor & Francis [Indexed in SCIE, Q2, Impact Factor:1.0 (2023)]