



**Harimohan Ghose College**  
**Report on the Student Seminar**  
**Department of Mathematics**  
**Date: 11<sup>th</sup> June 2024**

The student seminar, held on 11<sup>th</sup> June 2024, was organized by Department of Mathematics, Harimohan Ghose College for 4<sup>th</sup> Semester students to provide them with a platform to enhance their knowledge, share ideas, and develop public speaking and presentation skills. The students deliver their presentation in the following sequence.

| Date       | Sl. No. | Speaker          | Name of the Topic                                    |
|------------|---------|------------------|--|
| 11/06/2024 | 1.      | Anju Shaw        | Lagrange's Method for partial differential equations |
|            | 2.      | Anjum Firdous    | Partial Differential Equations                       |
|            | 3.      | Zaheen Fatma     | Propositional Logic                                  |
|            | 4.      | Rafat Saba       | Riemann integration, its use and importance          |
|            | 5.      | Affan Sadi       | Sequence of Functions                                |
|            | 6.      | Shagufta Khatoun | Sequence of Functions                                |

The first speaker of the seminar was Anju Shaw and she delivered her talk on Lagrange's Method for partial differential equations. The speaker started her talk by giving some information about the famous mathematician Joseph-Louis

Lagrange. Then she focused on the linear equations of order one and the existence of their solution. Finally, she has drawn the attention of the audience towards the working rule for solving one degree linear equation by Lagrange's method and its four types.

In the beginning of the talk, the speaker Anjum Firdous, who delivered her talk on Partial Differential Equations, recalled the concept of partial differential equation and highlighted some related examples. Then she has explained the concepts like order and degree of partial differential equations and linear and non-linear partial differential equations. The talk ended with the brief introduction of formation of partial differential equations.

Next Zaheen Fatma presented her talk on Propositional Logic. In this talk, first the speaker went through the definition of proposition and some related examples. Then she discussed about the logical connectives such as negation, conjunction, disjunction, implication and bi-implication. She ended her talk with the discussion of precedence of logical connectives.

After this Rafat Saba spoke on Riemann integration, its use and importance. First the speaker has given a brief introduction about the famous mathematician Bernhard Riemann. Then she recalled the notion of Riemann integration and some related concepts. In her talk, she highlighted the necessary and sufficient condition of Riemann integrability. Last but not the least, she beautifully ended her talk by providing some applications and significance of Riemann integration.

Then Affan Sadi delivered his talk on Sequence of Functions. The talk started with a brief introduction of function and sequence. Then he has recalled about the limit of a sequence. Finally, the speaker ended his talk with a clear explanation of pointwise and uniform convergence.

Finally, the last speaker Shagufta Khatoon also spoke on Sequence of Functions. The speaker started her talk by recalling the concept of sequence of functions with some beautiful examples. In her talk, she highlighted about

pointwise and uniform convergence. The talk ended with the briefing of Cauchy's general principle of uniform convergence.

The event concluded with a commitment to organize more such initiatives to nurture student talent and academic growth.

