**BTP MEET 1 – 19/08/24**

* **Discussed about the k-colorability of graphs and planar graphs are 4 colorable.**
* **Discussed about what are subdivisions and cartesian product of 2 graphs.**
* **Discussed about what would be the result if we take the cartesian product of a graph with itself.**
* **Discussed what are subgraphs and what is a minor.**
* **For next discussion: To find the proof of wagners’ theorem and kuratowski’s theorem.**

**BTP MEET 2 – 03/10/24**

* **Discussed about a software with which we can compare the equality of 2 word representable graphs.**
* **Discussed about what how can we check for the planarity of a word representable graph with the help of**
* **Discussed about the definitions and lemmas related to word representable graphs.**
* **Discussed for the proof of For every graph G a 3-subdivision of G is 3-word-representable.**
* **Planned to discuss for the problems which can be worked on with word represntable graphs.**

**BTP MEET 3 – 15/10/24**

* **Explained the proof for Lemma:- non-edges incident to x can be covered by a 2-uniform word.**
* **Explained the proof for theorem:- A graph G is word-representable if and only if it admits a semi-transitive orientation.**
* **Explained with the help of 3 cube construction the above theorem.**
* **Explained the concept of Bipartite Graphs.**
* **Tried to Explain Lemma 4.41**
* **Explained the concept of Trees alongwith an algorithm to construct 2-representation word for any tree.**
* **Similarly the concept of Cycles, Ladders alongwith their word construction algorithms.**