## St. Philomena's College (Autonomous), Bannimantap, Mysuru - 15.

# **PG** Department of Mathematics



### A Report On Special Lecture held during 24-06-2022

## Invited Lecture on Algorithms to find Minimum Spanning Trees of

Graphs

Resource Person: Prof.Veena Mathad, Professor, DoS in Mathematics, Manasagangotri, University of Mysore- 570006.

Venue: Room number 79, PG Block.



#### Objectives

To give brief insights of few algorithms to find minimum spanning trees of graphs through its applications.

#### Outlines of the Session:

- Preliminaries of graph theory.
- Understanding spanning tree with some examples.
- Importance to find the minimum spanning tree.
- Kruskals algorithm.
- Prims algorithm.
- Comparison between these algorithm.



On 24 June 2022, an invited lecture on "Algorithm to find Minimum Spanning Trees of Graphs" was held by PG Department of Mathematics. The speaker of the session Dr.Veena Mathad, Professor in DoS in Mathematics, Manasagangothri, Mysuru. She was welcomed by Mr. Bharath K, HoD and Assistant Professor, St. Philomenas College, Mysuru in the presence of Prof. Othbert Pinto, PG Director with the rest of the faculties and students.



Prof. Veena Mathad started of the session by discussing the basic concepts of Graph Theory which includes spanning tree, spanning subgraph, cyclic graph, acyclic graph and connected graph. Further, the speaker introduced the algorithms to find the minimum spanning tree namely Kruskals and Prims algorithms. The methodology was explained by considering examples in both the cases. Moreover the applications of the Minimum spanning tree in the design of Networks were demonstrated in the session through a real world problem.



Finally, the speaker concluded the talk by giving comparison between the discussed algorithm and by mentioning few other applications of finding the minimum spanning tree of graph in various real life situations like travelling salesman problem, finding airline routes and in telephonic networks.