

**Minimum Spanning Tree:**  $\rightarrow$  A spanning tree is the subgraph of an undirected connected graph.

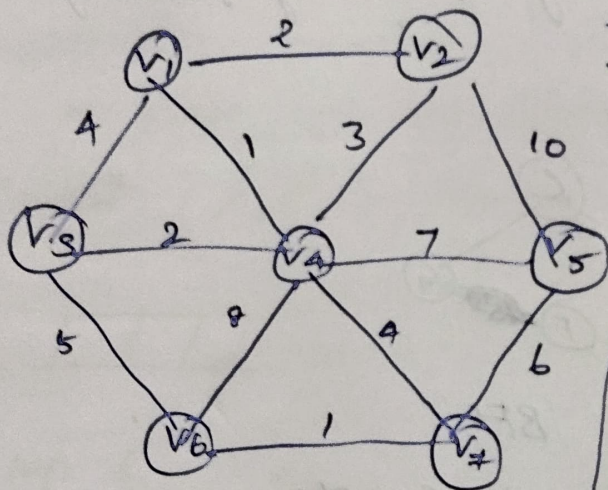
$\Rightarrow$  A minimum spanning tree of an undirected graph  $G$  is a tree formed from graph edges that connects all the vertices of  $G$  at lowest total cost.

$\Rightarrow$  A minimum spanning tree exists if and only if  $G$  is connected.

$\rightarrow$  To implement minimum spanning tree using these 2 ways

Ex:

- \* Prim's Algorithm
- \* Kruskal's Algorithm

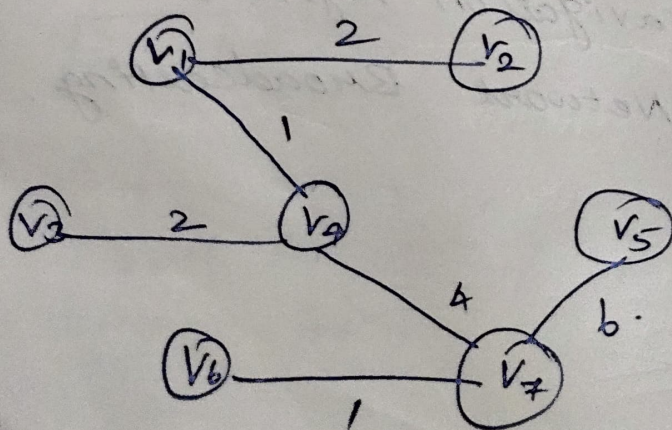


$\rightarrow$  Minimum spanning tree can be defined as the spanning tree in which sum of the weights of the edge is minimum.

$\rightarrow$  The weight of the spanning tree is the sum of the weights given to the edges of the spanning tree.

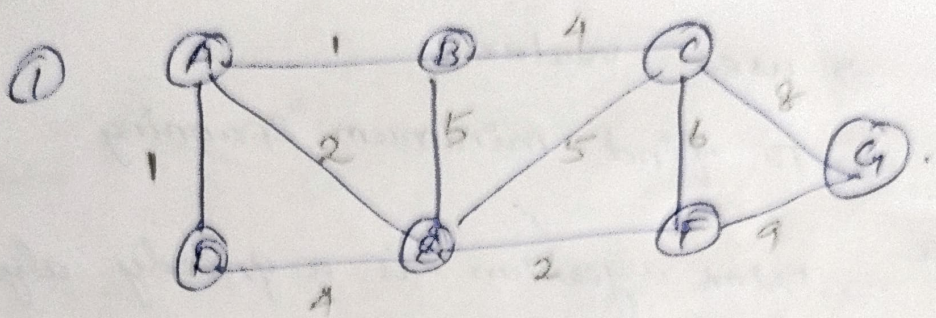
TO construct minimum spanning

Tree.

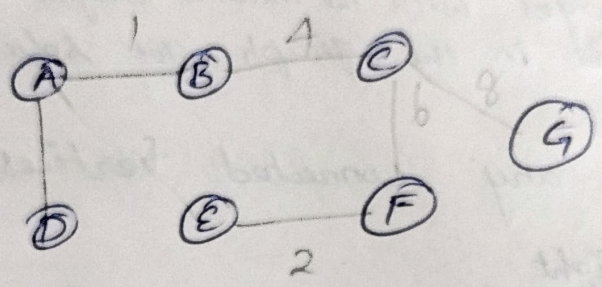


Q2:

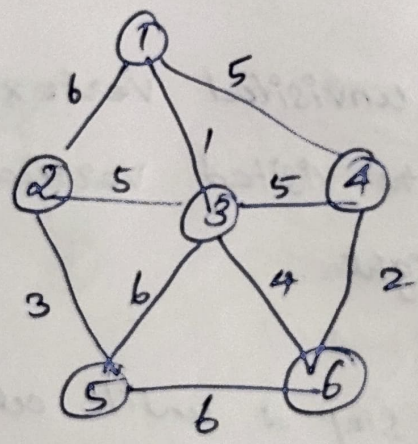
Prims's Algorithm



→ To construct Minimum Spanning Tree



②



To construct Minimum Spanning Tree.

