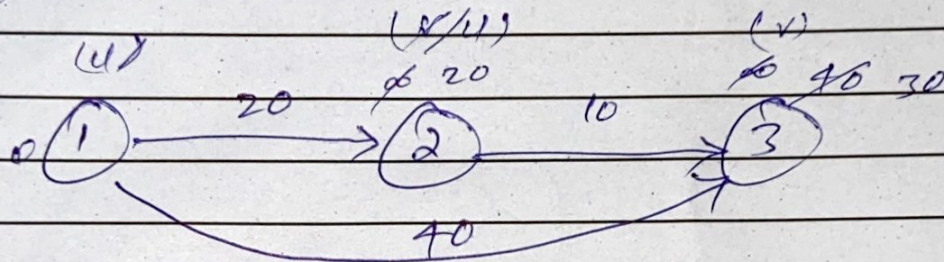


Date: 16/08/21.

# Dijkstra's Algorithm:

(Shortest Path).

ex 1



Relaxation:

$$\text{if } d(u) + c(u, v) < d(v)$$

then;

$$d(v) = d(u) + c(u, v).$$

$$\therefore d(u) + c(u, v) < d(v)$$

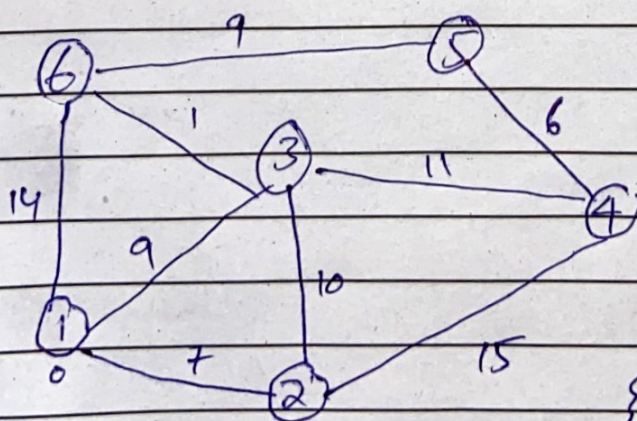
$$0 + 20 < \infty$$

$$20 < \infty.$$

then

$$40 < \infty$$

ex 2



Source	Destination:					
1	2	3	4	5	6	
	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	
{1,2}	7	9	<del>22</del>	$\infty$	14	
{1,2,3}	7	9	20	$\infty$	11	
{1,2,3,4}	7	9	20	20	11	
{1,2,3,6,4}	7	9	20	20	11	
{1,2,3,6,4,5}	7	9	20	20	11	