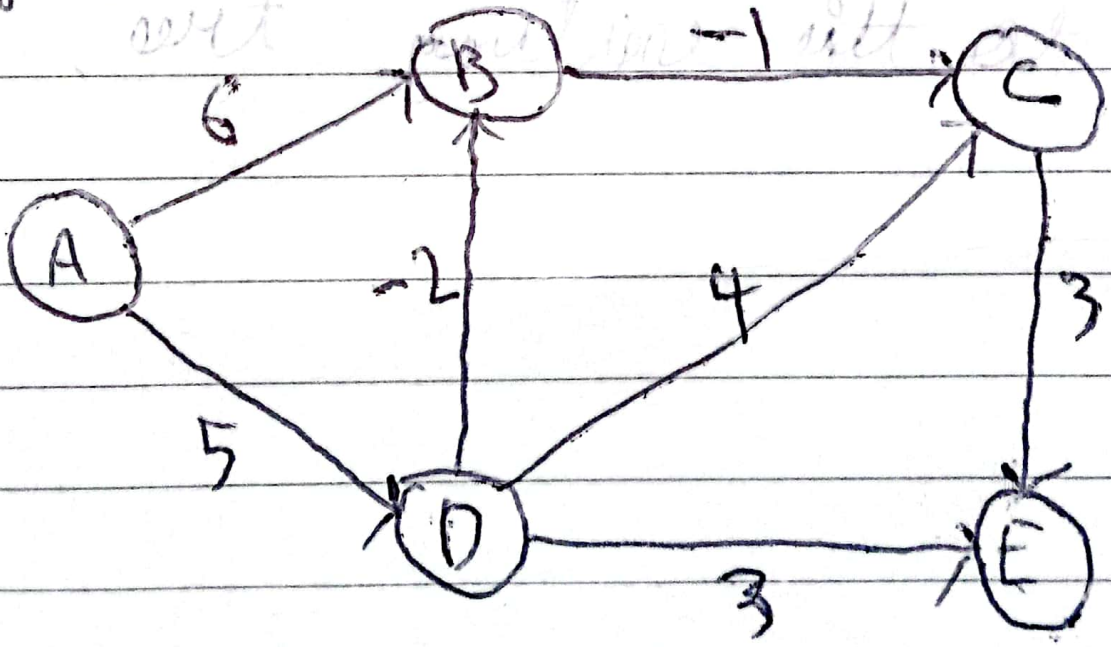
6. Ans: The algorithm used would use to compute the shortest path between node A & all other nodes in the graph is the Bellman-Ford algorithm.

The Bellman-Ford algorithm unlike Dijkstra's algorithm can handle negative weights on edge-weighted directed graphs.



This graph has 5 vertices & therefore, it can have

$|V|-1$ iterations, i.e. $|5|-1=4$ iterations.

Initialization :-

A	B	C	D	E
0	∞	∞	∞	∞

After 1st iteration :-
where edge A is relaxed :-

A	B	C	D	E
0	6	∞	5	∞

After 2nd iteration
where edge D is relaxed :-

A	B	C	D	E
0	3	9	5	8

After 3rd iteration :-
where edge B is relaxed :-

A	B	C	D	E
0	3	2	5	8

After 4th & final iteration :-
where edge C is relaxed :-

A	B	C	D	E
0	3	2	5	5

and all edges have now been traversed.

∴ Final graph :-