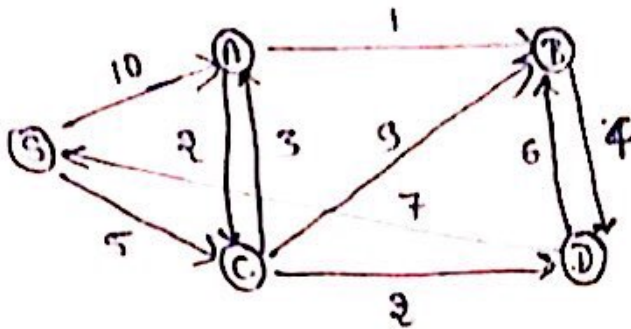


Dijkstra's algorithm :-



consider 'S' is a source vertex

- 1) $S(0, -)$ $A(S, 10)$ $\boxed{C(S, 5)}$ $D(0, \infty)$ $E(-\infty)$
- 2) $C(S, 5)$ $A(C, 8)$ $\boxed{D(C, 7)}$ $B(C, 14)$
- 3) $D(C, 7)$ $\boxed{A(C, 8)}$ $B(D, 13)$ $E(D, 14)$
- 4) $A(C, 8)$ $\boxed{B(A, 9)}$ $D(-\infty)$
- 5) $B(A, 9)$

$$B(A, 9) \rightarrow A(C, 8) \rightarrow C(S, 5) \rightarrow S(0, 1)$$

By Brna

$$B \rightarrow A \rightarrow C \rightarrow S$$

the shortest paths are:-

$$\therefore S \rightarrow C \rightarrow A \rightarrow B = 9$$

$$\cancel{S \rightarrow A \rightarrow B} \quad S \rightarrow C = 5$$

$$\cancel{S \rightarrow A \rightarrow D} \quad S \rightarrow C \rightarrow A = 8$$

$$\cancel{S \rightarrow A \rightarrow E} \quad S \rightarrow C \rightarrow D = 7$$



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