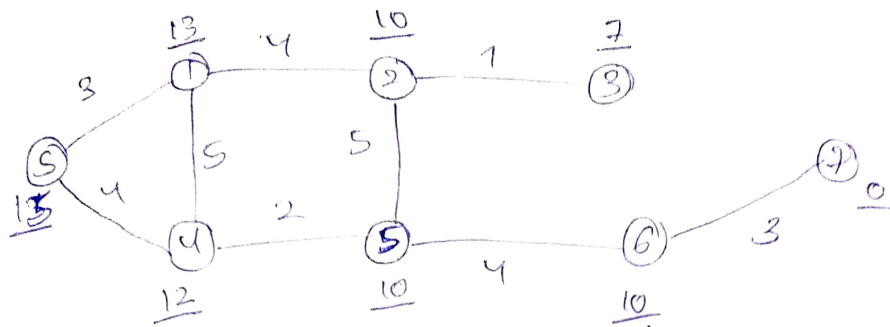


2)



Open O: open list (Priority queue) \leftarrow Heuristic value
C: closed list

~~Step 1~~

Step-1

$$O = \{S : 15\}$$

$$C = \text{null}$$

Step-2

$$O = \{1 : 13, 4 : 12\}$$

$$C = \{S\}$$

Step-3

$$O = \{1 : 13, 5 : 10\}$$

$$C = \{S, 4\}$$

Step-4

$$O = \{1 : 13, 6 : 10\}$$

$$C = \{S, 4, 5\}$$

Step-5

$$O = \{1 : 13, 7 : 0\}$$

$$C = \{S, 4, 5, 6\}$$

~~Step-6~~

\therefore Goal state reached

Hence the path is

$$S \rightarrow 4 \rightarrow 5 \rightarrow 6 \rightarrow 7$$