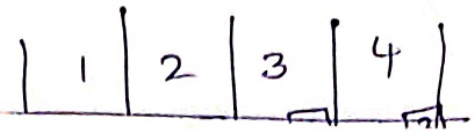
M S. (2)



OBST.

(1)

0	1	2	3
10	20	30	40.
4	2	6	3

	0	1	2	3	4
0	0	4	8 [1]	20 [3]	26 [4]
1		0	2	10 [3]	16 [3]
2			0	6	12 [3]
3				0	3 [4]
4					0

(1) $c(0,2) = \min \begin{cases} c(0,0) + c(1,2) + w(0,2) \\ c(0,1) + c(2,2) + 6. \end{cases}$

$\min \quad 0+2+6 = \boxed{8}$

$4+0+6 = 10.$

(4) $c(0,3) = \min \begin{cases} c(0,0) + c(1,3) + w(0,3) \\ c(0,1) + c(2,3) + 12 \\ c(0,2) + c(3,3) + 12. \end{cases}$

$= \begin{cases} 0 + 10 + 12 = 22 \\ 4 + 6 + 12 = 22 \\ 8 + 0 + 12 = 20 \end{cases}$

(2) $c(1,3) = \min \begin{cases} c(1,1) + c(2,3) + w(1,3) \\ c(1,2) + c(3,3) + w(1,3) \end{cases}$ (2+6)

$\min \begin{cases} 0+6+8 = 14. \\ 2+0+8 = 10 \end{cases}$

(3) $c(2,4) = \min \begin{cases} c(2,2) + c(3,4) + w(2,4) \\ c(2,3) + c(4,4) + w(2,4) \end{cases}$ (6+3)

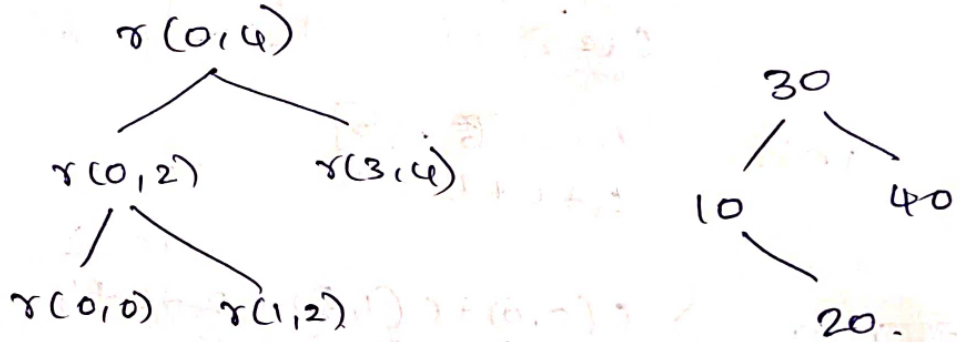
$= \begin{cases} 0 + 3 + 9 = 12 \\ 6 + 0 + 9 = 15 \end{cases}$

$c(1,4) = \min \begin{cases} c(1,1) + c(2,4) + w(1,4) \\ c(1,2) + c(3,4) + w(1,4) \\ c(1,3) + c(4,4) + w(1,4) \end{cases}$ (2+6+3)

$= \min \begin{cases} 0+12+11 = 26 \\ 2+3+11 = 16 \\ 10+0+11 = 21 \end{cases}$

$$c(0,4) = \min \begin{cases} c(0,0) + c(1,4) + w(0,4) & 4+12+6+3 \\ c(0,1) + c(2,4) + w(0,4) \\ c(0,2) + c(3,4) + w(0,4) \\ c(0,2) + c(4,4) + w(0,4) \end{cases}$$

$$= \min \begin{cases} 0+16+15 = 31 \\ 4+12+15 = 31 \\ 8+3+15 = 26 \\ 20+0+15 = 35 \end{cases}$$



Total cost of OBST = 26.

$$\boxed{T(n) = O(n^3)}$$