

15/4/21

ADA TEST

2K19/CO/319

⇒ SUBJECTIVE QUESTION

Q PROCEDURE

- 1) Draw a state space tree and set upper = ∞
- 2) Compute C^* , $U(x)$ for each node
- 3) $U(x) = -\sum P_i$

$$C^* = U(x) - [m - \text{current total weight}] * [\text{actual profit of remaining object}]$$

$$[\text{actual weight of remaining object}]$$

- 4) If $U(x)$ is minimum than upper then upper will set to $U(x)$.
- 5) If $C^* > \text{upper}$, kill node x .
- 6) Next live node becomes E-node and Generate children for E-node.
- 7) Repeat steps 2 to 6 until all the nodes get covered.
- 8) The minimum cost C^* becomes the answer node. Trace the path in backward direction from x to root for solution subset.

②

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upper = ~~32~~ -38

① $\hat{C}(1) = -38$
 $u(1) = -32$

O_i	P_i	W_i
1	10	2
2	10	4
3	12	6
4	18	9

② ③

$\hat{C}(3) = -32$
 $u(3) = -32$

$\hat{C}(2) = -38$
 $u(2) = -32$

$m=15$

$2+4+6+3/9 \times 9$
 $10+10+12+4/9 \times 9$

$\alpha_2 = 1$
④

$\hat{C}(4) = -38$
 $u(4) = -32$

$\alpha_2 = 0$

⑤

$\hat{C}(5) = -36$
 $u(5) = -22$

$\alpha_2 = 1$

$2+6+7/9 \times 9$
 $10+12+7/9 \times 9$

$\alpha_2 = 0$

⑥

⑦

$\hat{C}(6) = -22$
 $u(6) = -32$

$\hat{C}(7) = -30$
 $u(7) = -30$

$\alpha_3 = 1$

$\alpha_3 = 0$

⑧

⑨

$\hat{C}(8) = -38$
 $u(8) = -32$

$\hat{C}(9) = -38$
 $u(9) = -38$

$\alpha_4 = 0$

$\alpha_4 = 1$
⑩

$\alpha_4 = 0$

$\alpha_4 = 1$

⑪

⑫

$\hat{C}(12) = -38$
 $u(12) = -38$

$\hat{C}(13) = -20$
 $u(13) = -20$

Infeasible

$\hat{C}(11) = -32$
 $u(11) = -32$

$$12 - 9 - 4 - 2 - 1$$

\Rightarrow

$$x_1 = 1$$

$$x_2 = 1$$

$$x_3 = 0$$

$$x_4 = 1$$

vijeta