

Answer D

(a)

Each cut costs a constant value that is 'c' and if we cut 'n-1' times to make 'n' pieces of a single rod. Hence, we have to subtract 'c' from each piece cut.

Therefore, the modified formula:

$$r_n = c + \max_{1 \leq i \leq n} (p_i + r_{n-i} - c)$$

(b)

Bottom-up cut Rod (p, n)

1

let  $r[0 \dots n]$  be a new Array

2

$r[0] = 0$

3

for  $j = 1$  to  $n$

4

$q = -\infty$

5

for  $i = 1$  to  $j$

6

$q = \max(q, p[i] + r[j-i] - c)$

7

$r[j] = q$

8

return  $r[n]$