Solution

For a cubical box, we just saw that the 5th energy level is at 12 E_0, with a degeneracy of 1 and quantum numbers (2,2,2).

1. What is the energy of the next energy level?

    a. $13E_0$ b. $14E_0$ c. $15E_0$

$$E_{1,2,3} = E_0 (1^2 + 2^2 + 3^2) = 14\ E_0$$

2. What is the degeneracy of this energy level?

    a. 2   b. 4   c. 6