If 12 identical balls are to be placed in 3 identical boxes, then the probability that one of the boxes contains exactly 3 balls is :

(1) $220\left(\dfrac{1}{3}\right)^{12}$

(2) $22\left(\dfrac{1}{3}\right)^{11}$

(3) $\dfrac{55}{3}\left(\dfrac{2}{3}\right)^{11}$ ✓

(4) $55\left(\dfrac{2}{3}\right)^{10}$

There is ambiguity in this question.

It should be mentioned that boxes are different and one particular box has 3 balls.

Then we can proceed as follows

No. of ways $= \dfrac{^{12}C_3 \times 2^9}{3^{12}} = \dfrac{55}{3}\left(\dfrac{2}{3}\right)^{11}$

Correct option is (3)