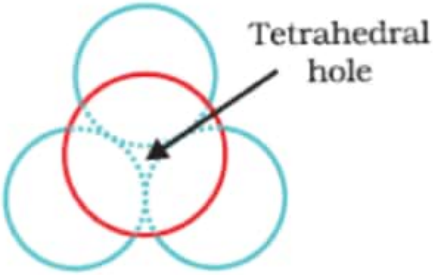
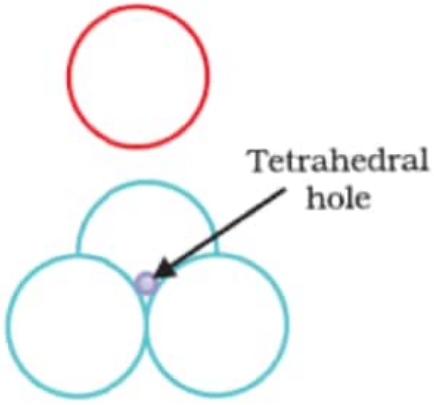
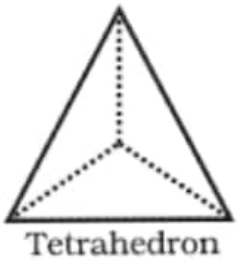
Tetrahedral Voids:

Wherever a sphere of the second layer is above the void of the first layer (or vice versa) a tetrahedral void is formed. These voids are called tetrahedral voids because a tetrahedron is formed when the centres of these four spheres are joined. These voids have been marked as 'T' in the figure.

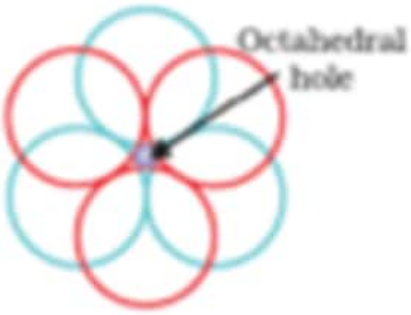


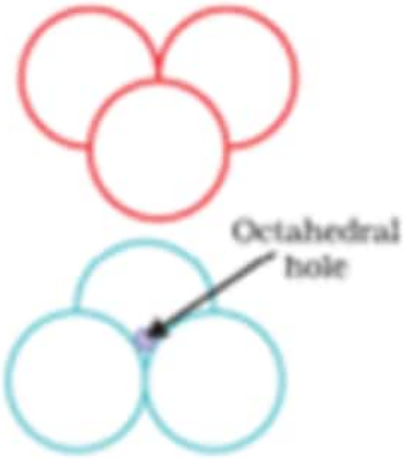




Octahedral Voids:

At other places, the triangular voids in the second layer are above the triangular voids in the first layer, and the triangular shapes of these do not overlap then the octahedral void is formed. One of them has the apex of the triangle pointing upwards and the other downwards. These voids have been marked as ‘O’ in the figure.





Number of Voids:

The number of these two types of voids depends upon the number of close-packed spheres.

Let the number of close-packed spheres be N, then, the number of octahedral voids generated = N and the number of tetrahedral voids generated = 2N