FAQ's

1. Define the principle of moment

When an object is in an equilibrium the sum of all the clockwise moment will be equal to the sum of all the anticlockwise moment.

2. **State Varignon's theorem**

Moment of resultant of all the forces about the point is equal to the algebraic sum of moments of all the forces about the point.

3. **A force of 100 N is acting at a point A as shown in Figure given below. Determine the moments of this force about *O.***

The moment of force 100 N about O, can also be determined by using Varignon's principle. The force 100 N is replaced by its two rectangular components at any convenient point. Here the convenient point is chosen as *C.* The horizontal and vertical components of force 100 N acting at C are shown in Fig. 2.36.

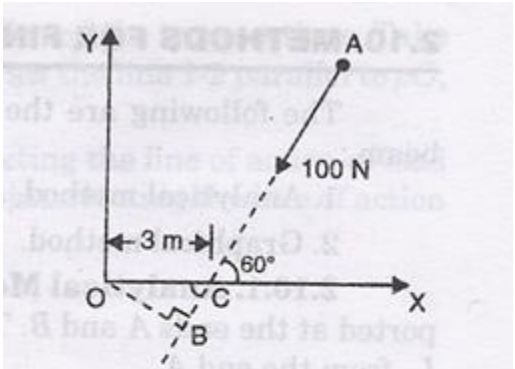

Fig. 2.35

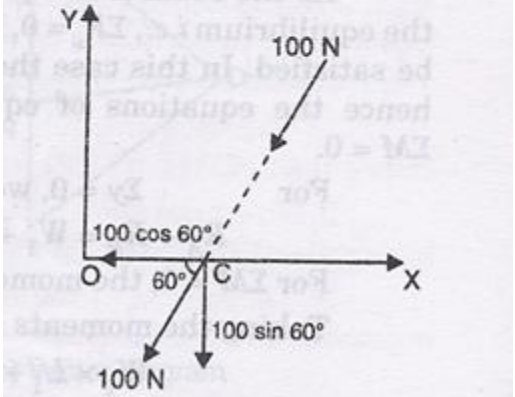

Fig. 2.36

The horizontal component
= 100 × cos 60° = 50 N

But this force is passing through O and hence has no moment about O.

The vertical component

= 100 × sin 60° =-100 × 0.866 = 86.6 N

This force is acting vertically downwards at *C.* Moment of this force about O

=86.6 × OC = 86.6 × 3

= 259.8 N (clockwise).