1. **We know that face centered lattice in cubic and orthorhombic (FCC & FCO) system are listed in Bravais lattice system but face centered tetragonal (FCT) is not listed, why?**
2. **Draw the plane with miller indices (122) in the unit cell of cubic lattice having lattice parameter ‘a’. Find its distances from the parallel plane through the origin.**
3. **Find the miler indices of plane which makes intercept of 2 on a-axis and 3 on b-axis and is parallel to c-axis.**
4. **Find the miller indices of plan that makes intercepts on a, b and c axis equal to 4 Å, 2 Å and 3 Å in the orthorhombic crystal with a : b : c = 2 : 4 : 3.**
5. **The Bragg angle for reflection from (110) plane is 20.2 degree. Find the wavelength of X-ray. (lattice parameter of the crystal is 3.15 Å)**