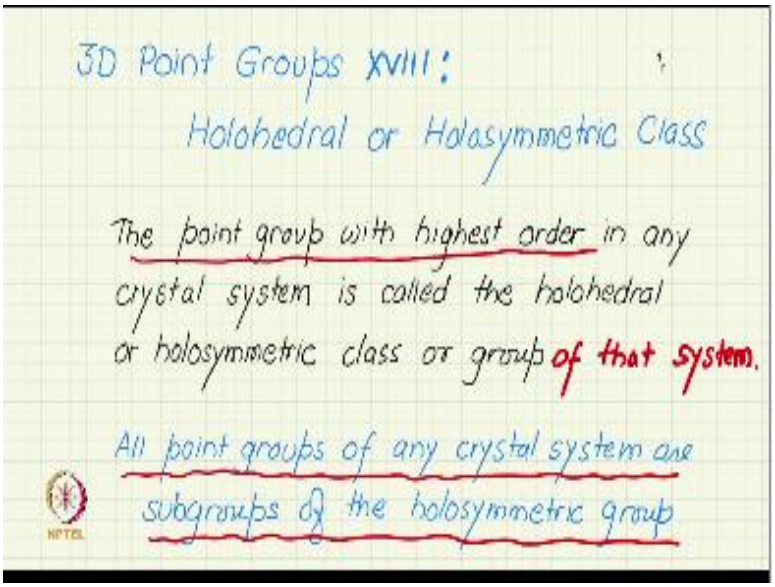
Crystals, Symmetry and Tensor
Professor Rajesh Prasad
Department of Materials Science and Engineering,
Indian Institute of Technology, Delhi
3D Point Groups XVIII: Holohedral or Holosymmetric Class

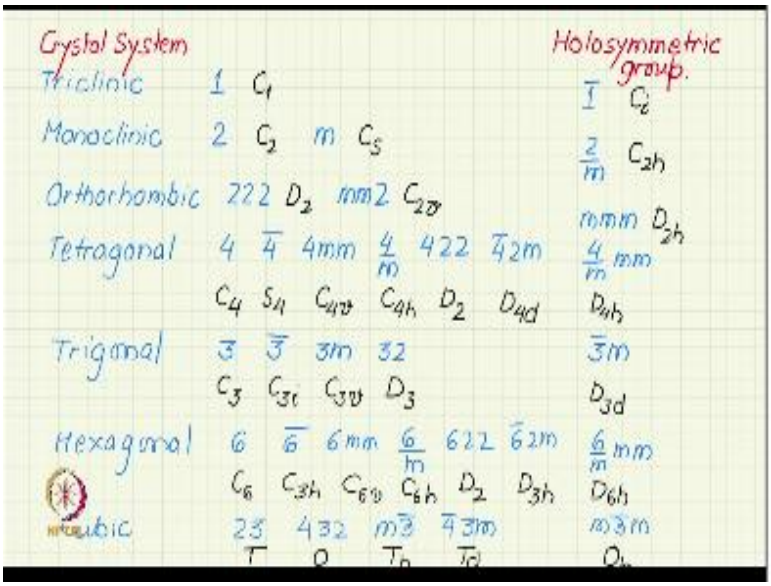
(Refer Slide Time: 0:05)



In this video we will define what is called holohedral or Holosymmetric groups or holosymmetric class. I have given the definition here point groups with highest order the point groups with highest order in any crystal system is called the holosymmetric class or group of that system. So, each system has its own holosymmetric class.

So, since there are seven crystal systems so there will be seven holosymmetric classes belong to each crystal system. And other point groups all other point groups of a crystal system will be subgroups of the holosymmetric groups.

(Refer Slide Time: 0:56)



So, let us again begin with the table of 32 point groups here I have listed the holosymmetric group of each crystal system towards the right. So, you can see that 1 bar is the holosymmetric group for triclinic, 2 by M for monoclinic, mmm for orthorhombic, 4 by mmm 40 tetragonal, 3 Bar M for trigonal, 6 by mm for hexagonal and M 3 Bar M for cubic.

These are the most symmetric point groups in each crystal system and all the point groups of that system are subgroups of the holosymmetric group. Thank you very much