

- This is another technique for representing the solids in which a solid is further subdivided into a no. of closely spaced, non-intersecting smaller solids or cells. These cells may or may not be same type as original solid. In fact they may vary in size, type and orientation.

These are two main methods by which spatial

- partitioning representation is accomplished:

- (a) Cell decomposition
- (b) Spatial-occupancy enumeration

Cell Decomposition

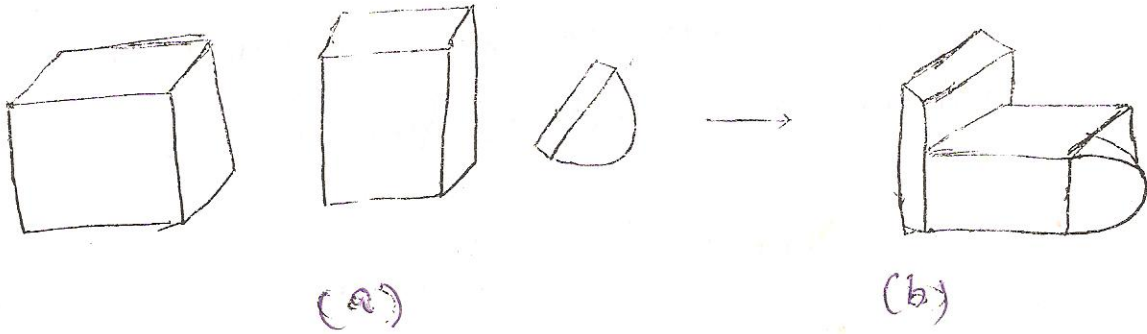
It is one of the most commonly used technique of spatial partitioning. It decomposes the solid into a set of primitive cells that are parametrized

Cell decomposition makes use of bottom up construction in which complex shapes are created from simple primitives by sticking them together but the cells must not intersect while sharing single point, edge or face.

Cell decomposition has a potential use in finite analysis in which, system to be analysed is described & divided into smaller elements called finite elements, with the condition

(22)

that the elements should not overlap each other.



The solid in fig. (b) is created by sticking prisms in fig. (a) at flat faces.