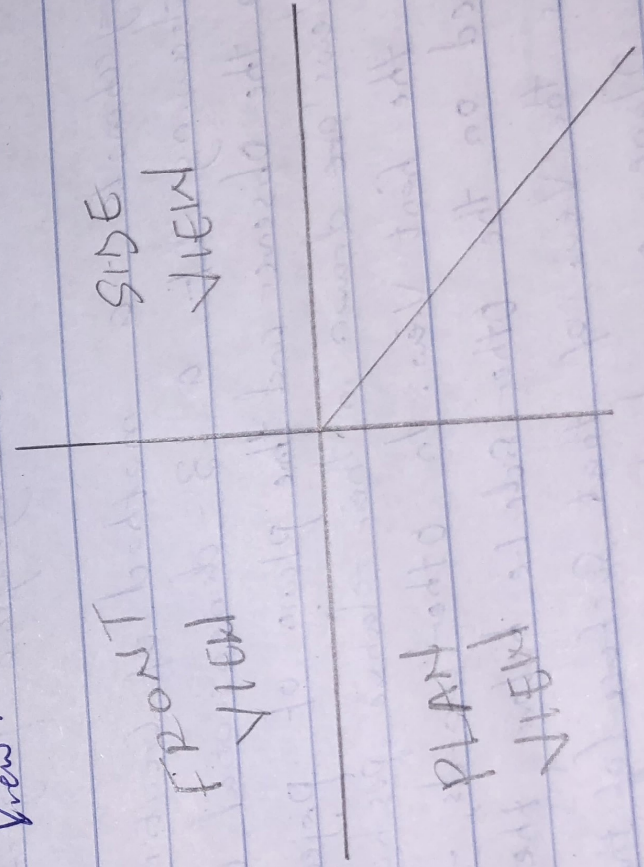


⑤ Third - Angle projection is a method of orthographic projection which is a technique in portraying a 3D design using a series of 2D views. The object is assumed to be situated in the third quadrant. The planes of projection are assumed to be transparent. They lie between the object and the observer. When the observer views the object from the front, the rays of sight intersect the V.P. The figure formed by joining the points of intersection in correct sequence is the front view of the object. The top view is obtained in a similar manner by looking from above. When the 2 planes are brought in line with each other, the views will be. The top view in this case comes above the front view.



OBJECTIVES

- ① Reference plane (A)
- ② False (B)
- ③ Directly (C)
- ④ 120° (CB)
- ⑤ 60° (A)
- ⑥ Rivet (CB)
- ⑦ Crowning (C)
- ⑧ 45° (CB)
- ⑨ A Circle (A)
- ⑩ An Ellipse (A)
- ⑪ Cylinder (C)
- ⑫ Frustum (Δ)
- ⑬ Pivot Bearing (C)
- ⑭ 55° (C)
- ⑮ Horizontal plane (Δ)

THEORY

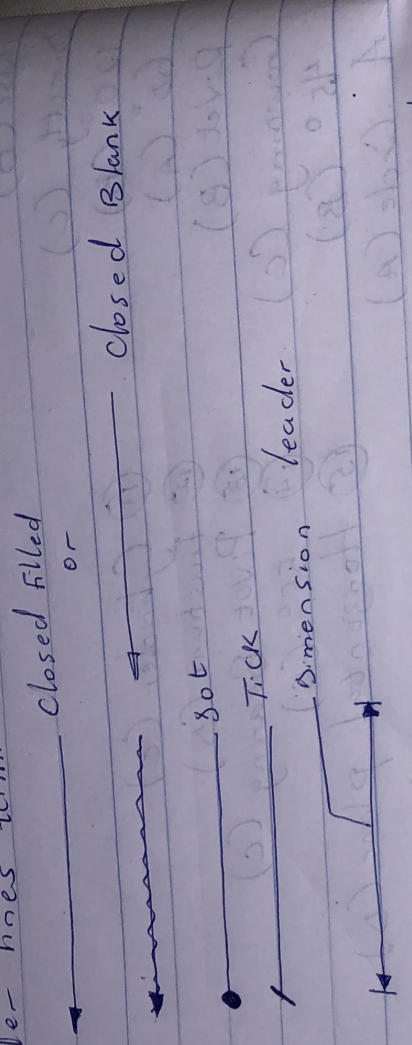
① By taking an imaginary cut through the object and removing a portion, the inside features may be seen more clearly.

- ② i) Do not leave any size, shape, or material in doubt
- ii) To avoid confusion and the possibility of error, no dimension should be repeated twice on any sketch or drawing.
- iii) Dimensions and notations must be placed on the sketch where they can be clearly and easily read.

③ a) Half Section - Is a view of an object showing one-half of the view in section; ~~as~~ The diagonal lines on the section drawing are used to indicate the area that has been theoretically cut. These lines are called section lining.

④ Full-section - is a complete, detailed cross-sectional drawing of a building, usually around a load bearing wall. If the imaginary cutting plane passes through the entire object, splitting the drawn object into two with interior of the object revealed, this is called a "full section".

4) Leader lines terminators are:



5) Ca) Scale = 5:1 - It means A 50mm line is to be drawn at a scale of 5:1. (i.e. 5 times more than its Original size).

6) Scale 1:10 - It means anything drawn with the size of "1" would have a size of "10" in the real world, so a measurement of 150mm on the drawing would be 1500mm on the real object.

shape Identification Symbol

6) Ca)	Diameter	
(b)	Radius	
Ca)	Square	
(d)	Spherical radius	
(e)	Centre line	
(f)	Cutting plane line	
(g)	Long break	

7) A series of points on one plane may be projected onto a second plane by choosing any focal point, or origin, and constructing lines from that origin that pass through the points on the first plane and impinge upon the second. (Central projection).

ii) If two planes are parallel, then the configurations of points will be identical; otherwise this will not be true.

iii) Choosing a plane through the centre of the sphere and projecting the points on its surface along normals, or perpendicular lines, to that plane.

Orthographic Projection is a means of representing three-dimensional objects in two dimensions. It is a form of parallel projection, in which all the projection lines are orthogonal to the projection plane, resulting in every plane of the scene appearing in affine transformation on the viewing surface.

8) An orthographic projection of an object is called Orthographic Projection when the depictions of objects where the principal axes or planes of the object are also parallel with the projection plane. Also if the rays are perpendicular to the picture plane, the projection is known as Orthographic Projection.

9) First angle projection is a method of creating a 2-dimensional drawing of a 3-dimensional object. The objects lie between the observer and the plane of projection. In this method, when the views are drawn in their relative positions, the top view comes below the front view. In other words, the view seen from above is placed on the other side (i.e. below the front view). Each projection shows the view of that surface (of the object) which is remote from the plane on which it is projected and which is nearest to the observer. The object is placed in the first quadrant.