SUBJECT: TECHNICAL DRAWING.

CLASS: SS2.

TOPIC: INTERSECTION/ INTERPENETRATION OF SOLIDS

INTERSECTION/ INTERPENETRATION OF SOLIDS

When a solid penetrates into another, their surface meeting point is what is called or known as line of intersection or interpenetration. This process is referred to as intersection of surfaces or interpenetration of solids.

The penetrating solids have two lines of intersection. They are;

1. Where the solid enters and
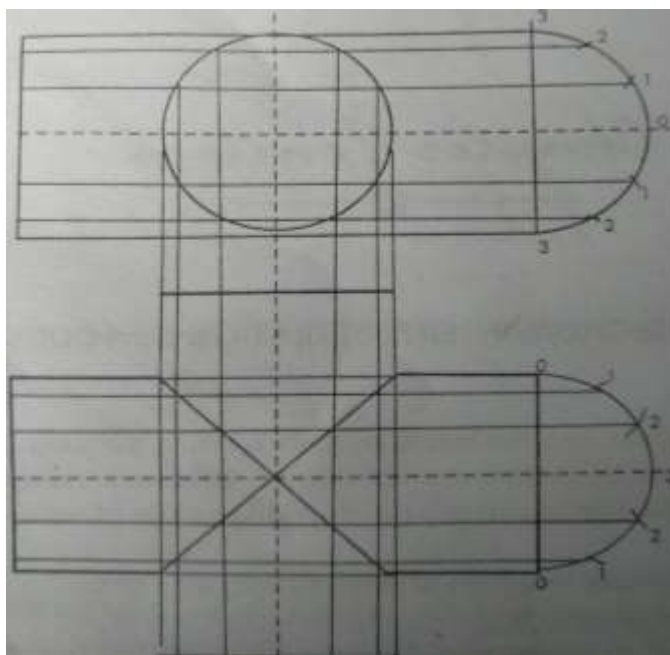2. Where the solid emerges out from.

However, the lines of intersection of both surfaces are common and their nature depends on the form of the solid being intersected.

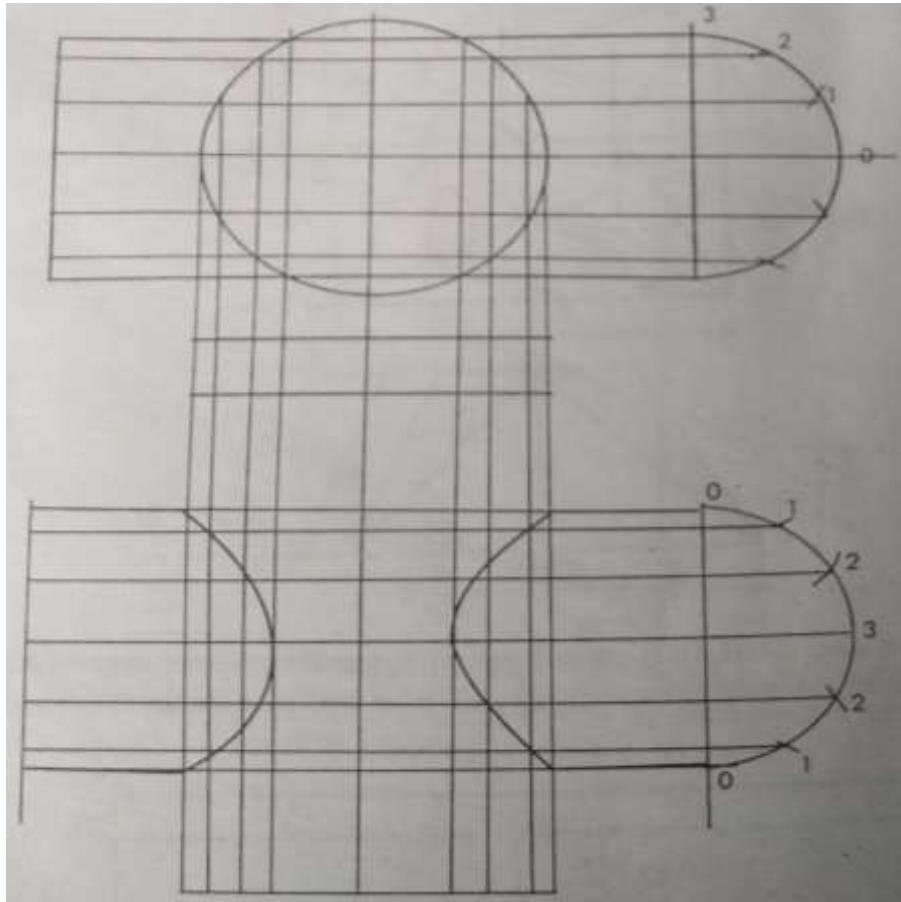The following areas involve the application of intersection or interpenetration of solids.

a. Sheet metal/ fabrication work where objects have to be made of two different intersecting surfaces.
b. Pipe fitting.
c. Boiler fitting.
d. Automobile layout.
e. Chemical plant installation.
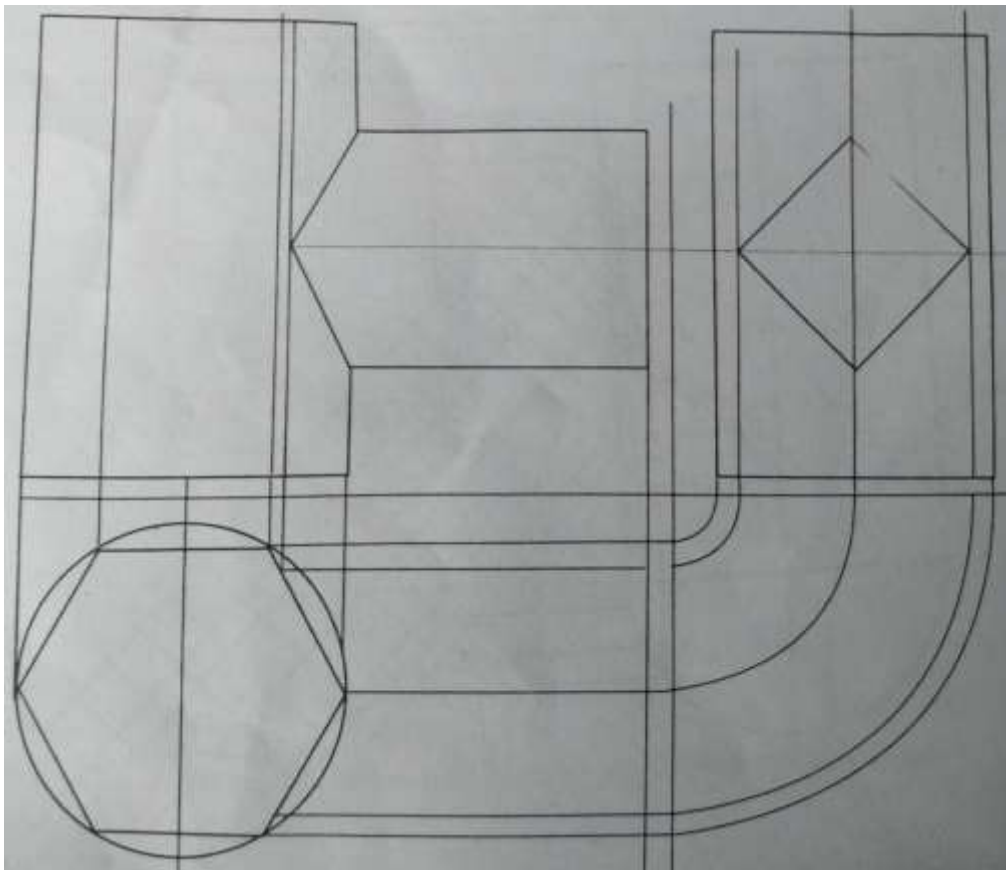f. Aeroplane construction etc.

CONSTRUCTIONS

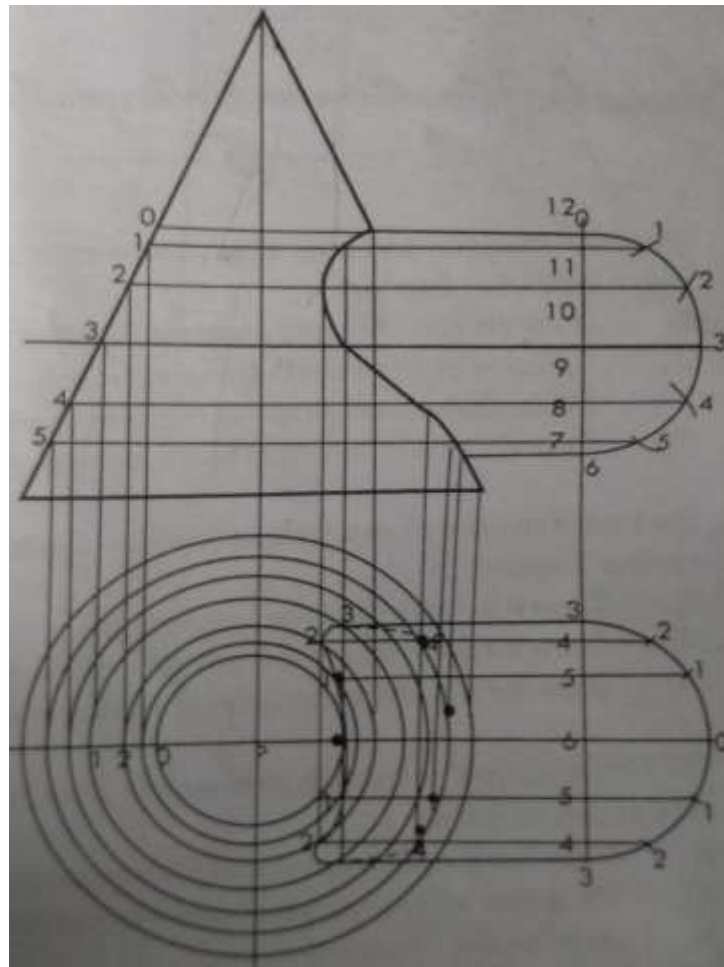1. **To construct the plan and elevation of two intersecting cylinders.**

2. To construct the plan of interpenetrating cylinders.

3. To determine the point of intersection of square prism intersecting a hexagonal prism.

4. To determine the curve of intersection of a cylinder intersecting a right cone.

5. To draw the curve of intersection of two unequal cylinders, indicating the surface development of the smaller cylinder from the front elevation and section in plan of a similar cylinder on the plan.