Rajiv Gandhi Institute of Petroleum Technology
Jais, Amethi

An Institution of National Importance, Government of India

Engineering Graphics (ME121)

Oblique and Perspective Projections

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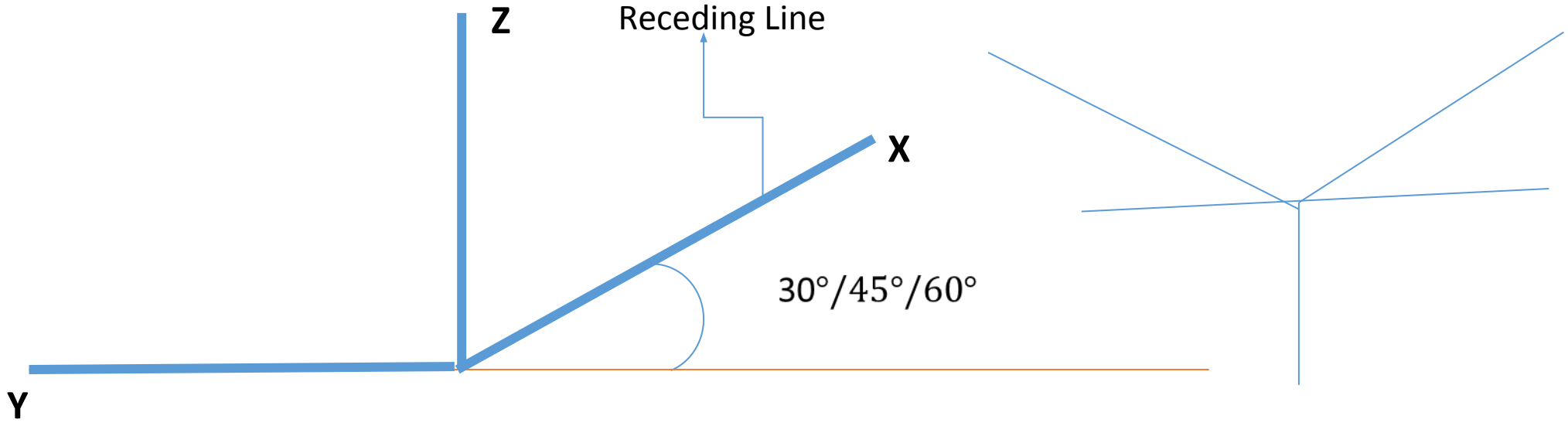
Topics

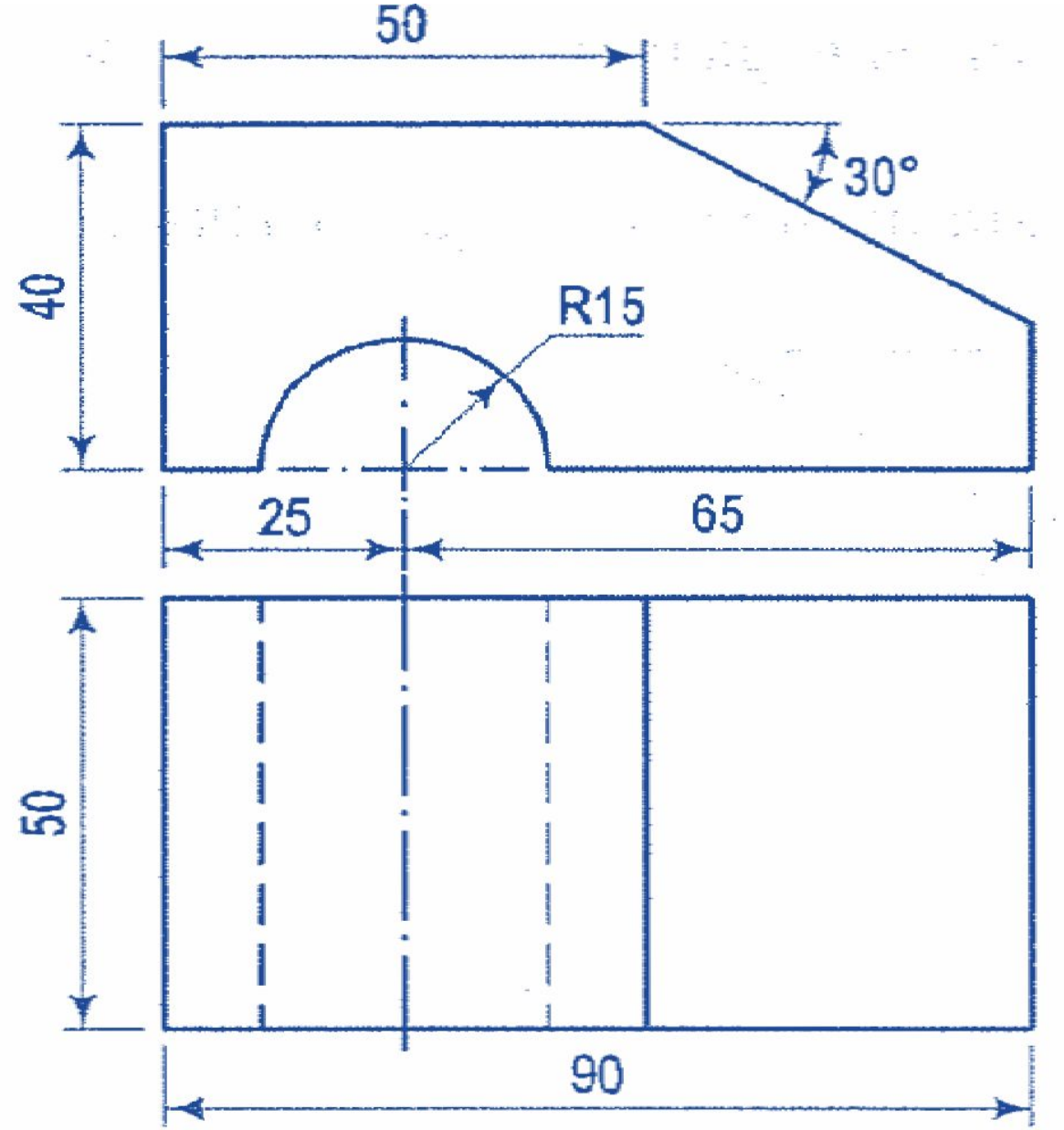
1. Oblique projection principle and its method
2. Exercise
3. Perspective Projection Principle and its method
4. Exercise

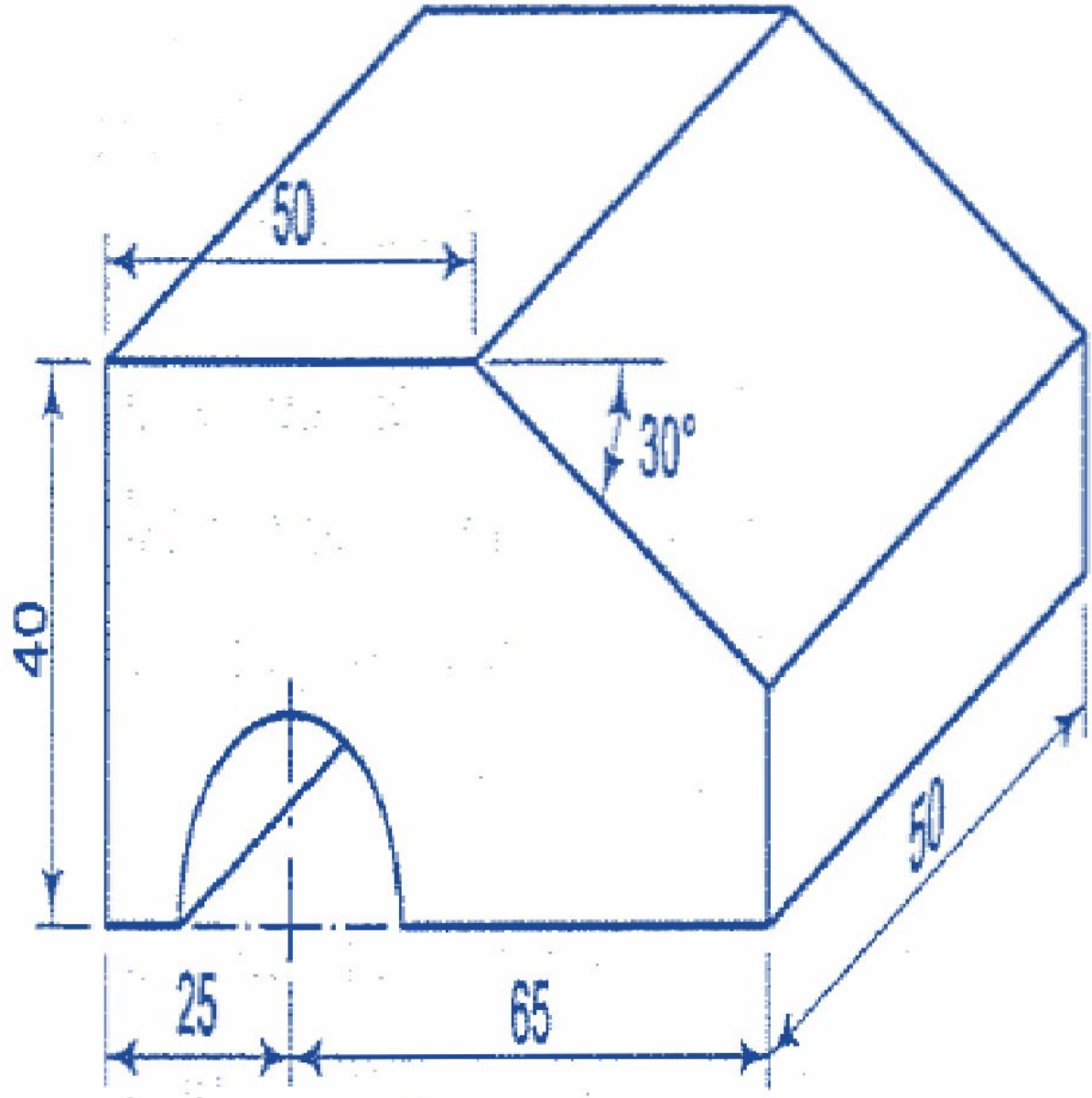
Oblique Projection

Oblique Projection is also pictorial projection and this type of projection is used for assembly of an object



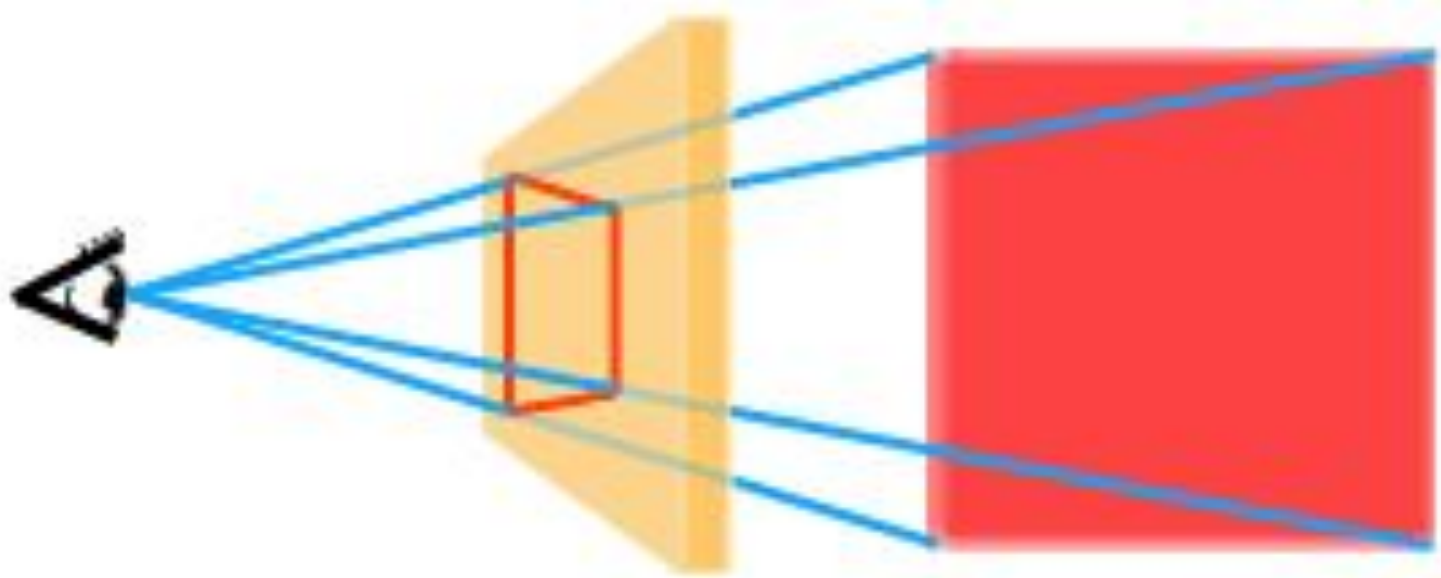
The principle difference between Oblique and Isometric projection is that in case of isometric projection all three axis are equally inclined at 120° whereas in oblique projection third axis is inclined at an angle of 30°/45°/60° wrt two perpendicular axis


50
30°
40
R15
25
65
50
90


50
30°
40
50
25
65

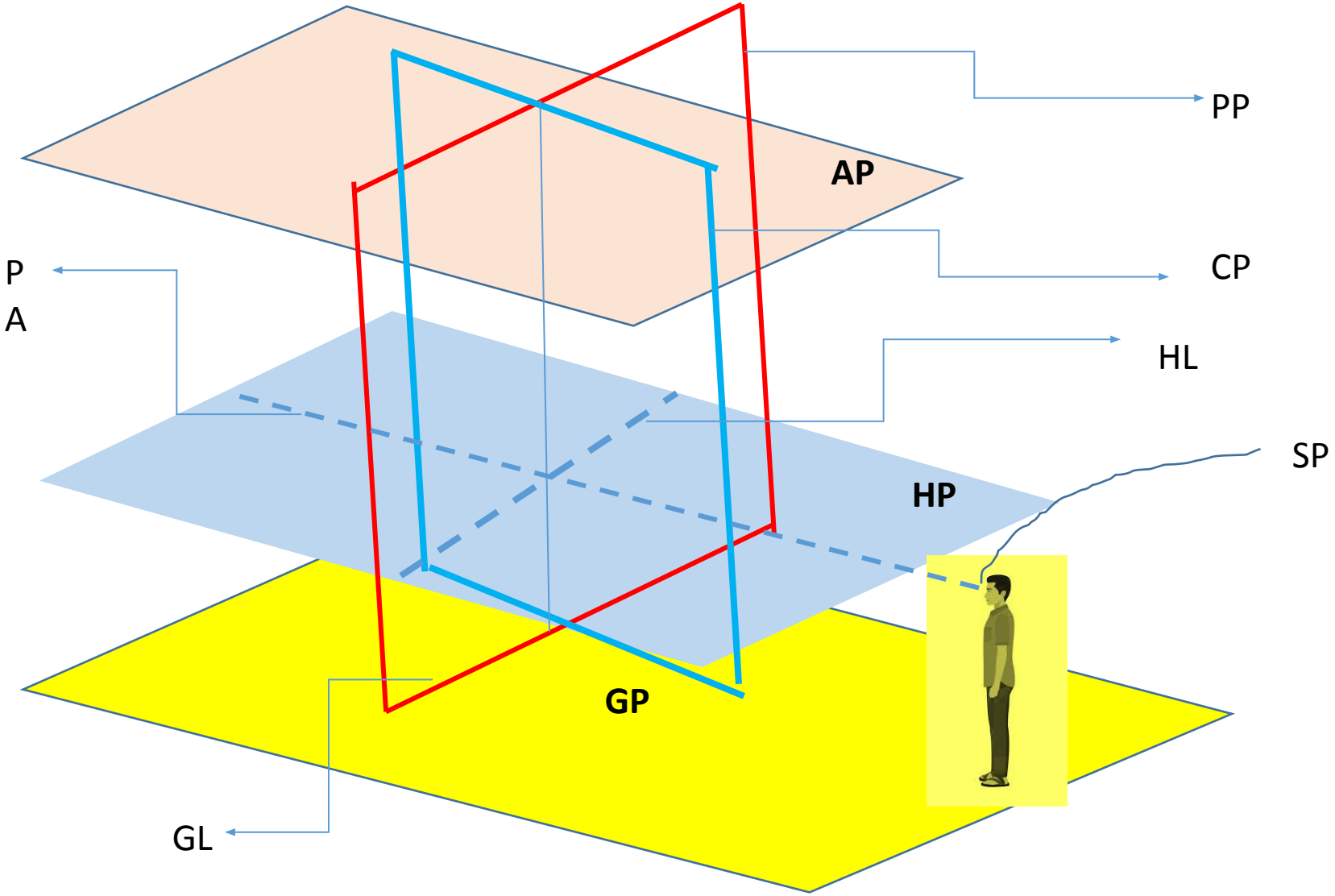
Perspective Projection

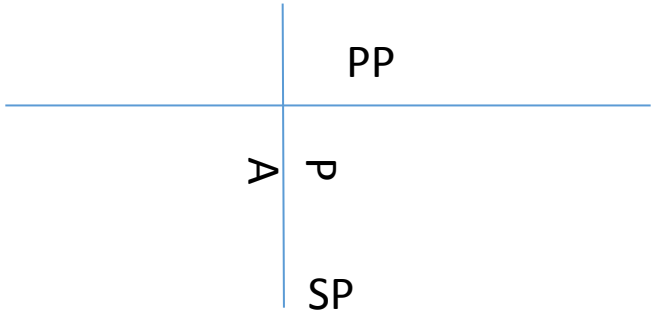
- In perspective projection, the eye is assumed to be situated at a definite position relative to the object. Here the vertical plain is called as picture plain and is placed between object and eye. The projector lines are not parallel to each other and these projectors are coincide at observer eye i.e. station point(SP)
- The perspective projection is third angle projection and it is used in architecture drawing and it is most realistic projection.

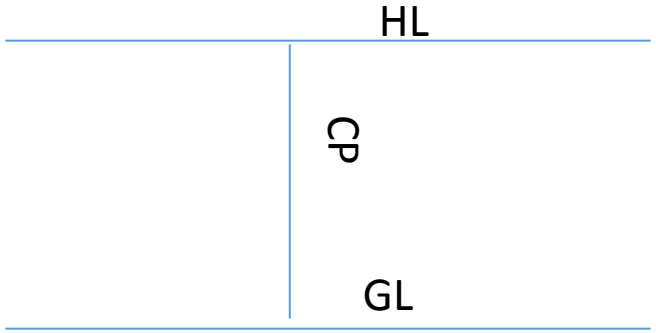


Types of plains

- Ground Plain(GP): It is horizontal plain where object placed.
- Station Point(SP): It is point where observer eye located
- Picture Plain (PP): it is VP located b/w SP and object
- Horizontal Plain (HP): It is imaginary plain is at level of eye
- Auxiliary Plain(AP): it is horizontal plain above HP where top view form







PA=Perpendicular axis

Type of perspective projection

- One point PP
- Two point PP
- Three point PP

exercise

1. Draw the one point perspective projection for a box of dimensions $(40\times 50 \times 70)$ mm the station point 70 mm away from PP and 90 mm above ground if SP is 100 mm to the left of axis
2. If SP is 100 mm to the right of axis