Noakhali Science and Engineering University
Noakhali-3814

Course Code: **ICE-1108**

Course Title: **Engineering Drawing**

Course Teacher: DR. MD. ASHIKUR RAHMAN KHAN

Department of Information and Communication Engineering

ICE-1108 Engineering Drawing

Lab 2

Drawing Method and Orthographic View

Course Teacher: DR. MD. ASHIKUR RAHMAN KHAN

Projection:

Shape is described by projection. Projection is the process in which the rays of sight taken in a particular direction from an object to form an image on a plane called plane of projection or picture plane.

Orthographic:

When the rays are perpendicular to the plane the projective method is orthographic.
Consisting of a set of two or more separate views of an object taken from different directions, generally at right angles to each other. And collectively the views describe the object completely.

Fundamental Method of Drawing

B. Two fundamental methods of shape representation are used

i. **Orthographic views**

ii. **Pictorial views**

Orthographic views:

It consists of a set of two or more separate views of an object taken from different directions, generally at right angles to each other and arranged relative to each other in a definite way.

Orthographic views

Orthographic views **such as top, front, side view etc which are separated from each other**, provide necessary information about dimensions material, surface finish etc. to manufacture the object.

The most **usual combination selected from the six possible views consists of the top, front and right-side views** .

Consisting of a set of two or more separate views of an object taken from different directions, generally at right angles to each other and **collectively the views describe the object completely**.

Orthographic views

The following steps take you through the creation of an orthographic projection.

1. **Choose a front view**. This is the view that shows the most about the object.
2. Decide how many views are needed to completely describe the object. **If you are unable to determine** which views will be needed, **draw the standard views** (front, top and right side).
3. **Draw the visible features of the front view**.
4. Draw projectors off of the front view horizontally and vertically in order to create the boundaries for the top and right side views.

Orthographic views

5. **Draw the top view**. Use the vertical projectors to fill in the visible and hidden features.

6. Project from the top view back to the front view. Use the vertical projectors to fill in any missing visible or hidden features in the front view.

7. Draw a 45° projector off of the upper right corner of the box that encloses the front view.

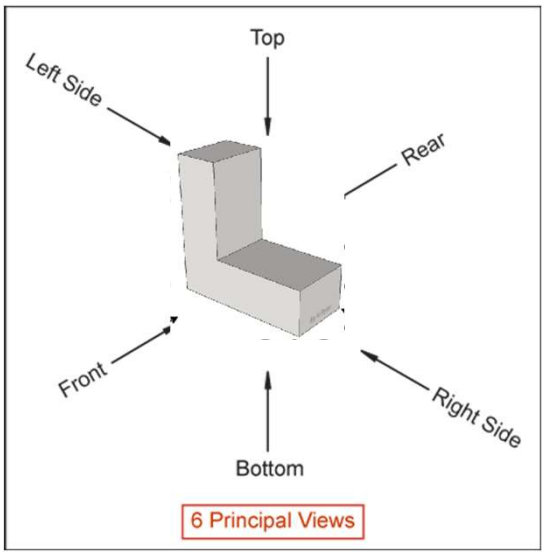
8. From the top view, draw projectors over to the 45° line and down in order to create the boundaries of the right side view.

9. Draw the right side view.

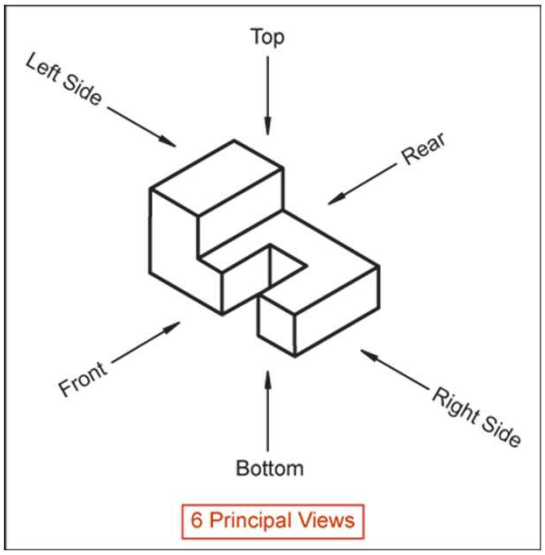
Project back to the top and front view from the right side view as needed.

Draw center lines where necessary.

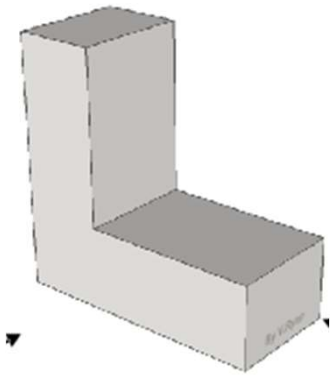
Orthographic views



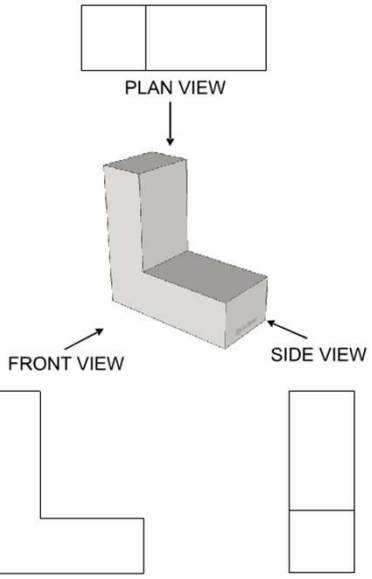
Orthographic views



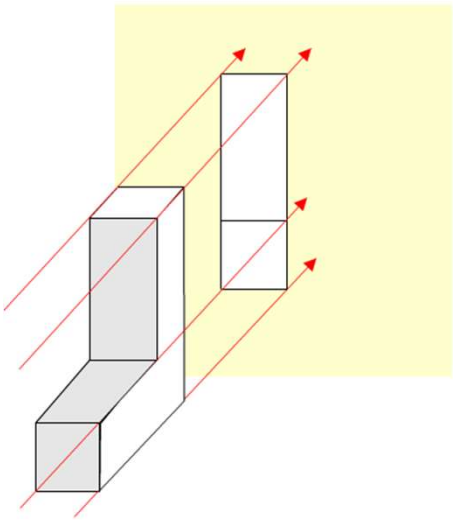
Orthographic views

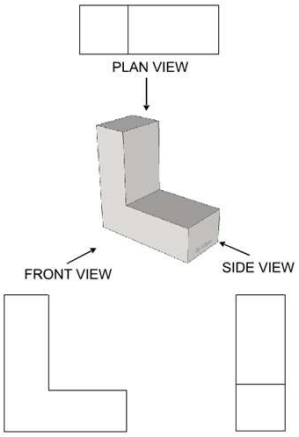


Orthographic views

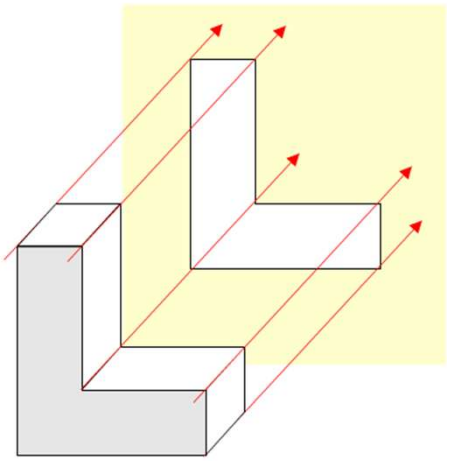


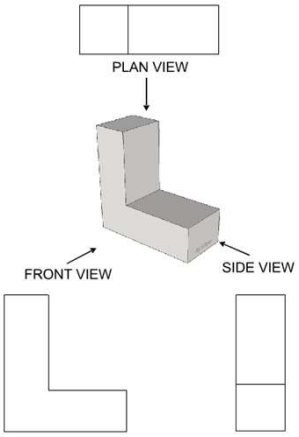
Side View



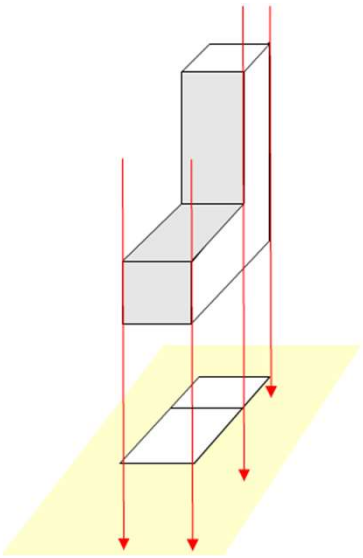


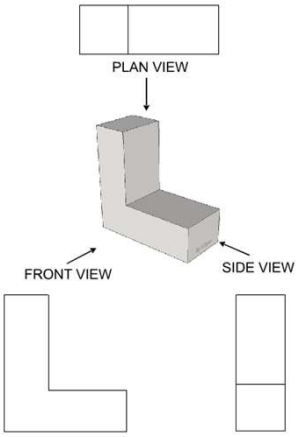
Front View



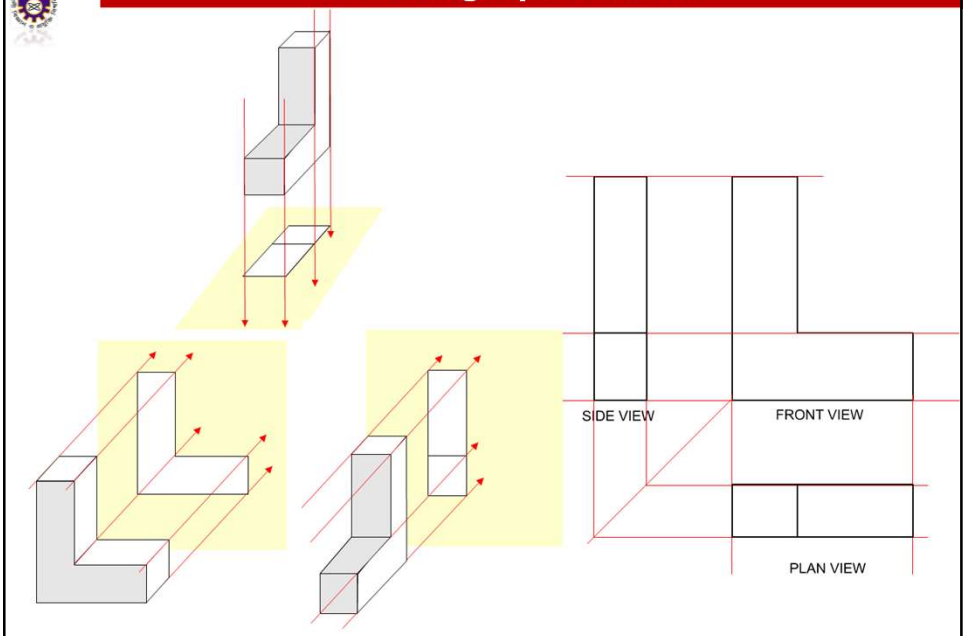


Plan View

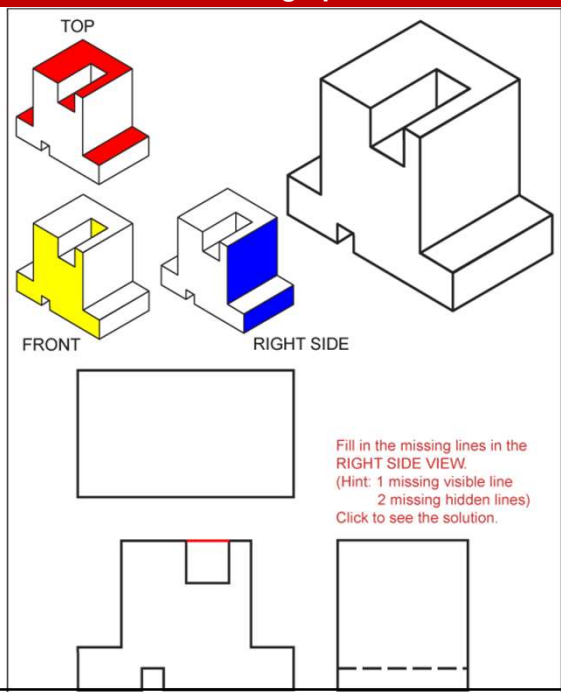




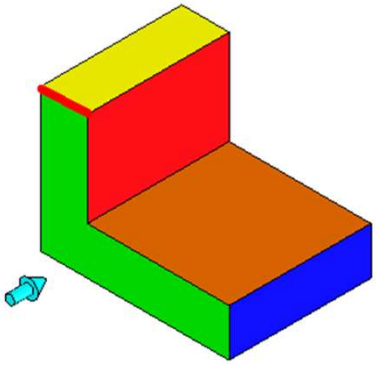
Orthographic views



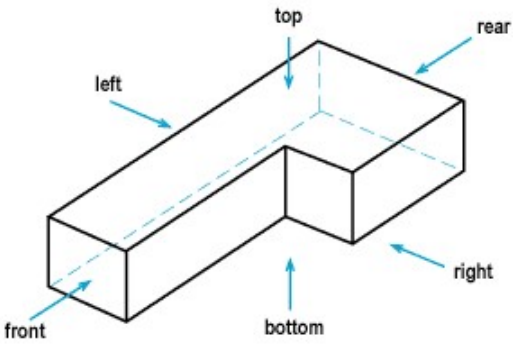
Orthographic views



Orthographic views

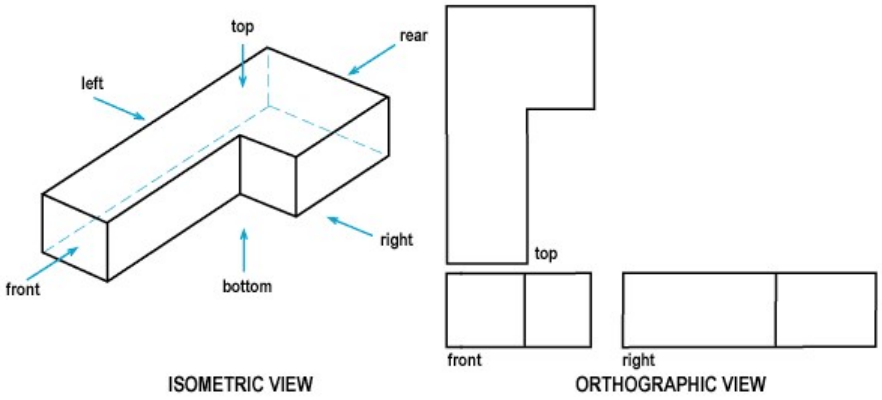


Orthographic views

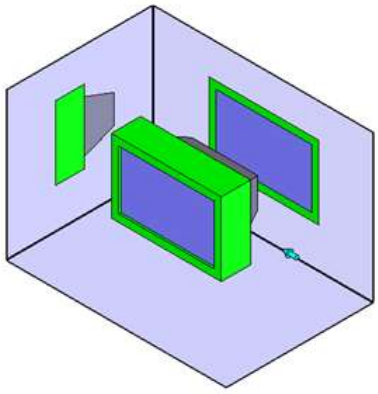


ISOMETRIC VIEW

Orthographic views

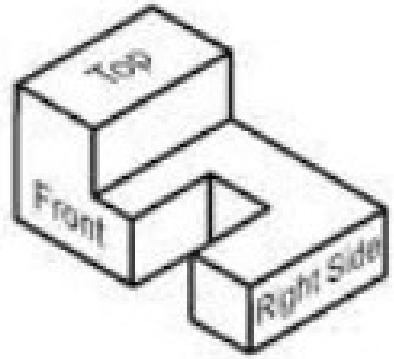


Orthographic views

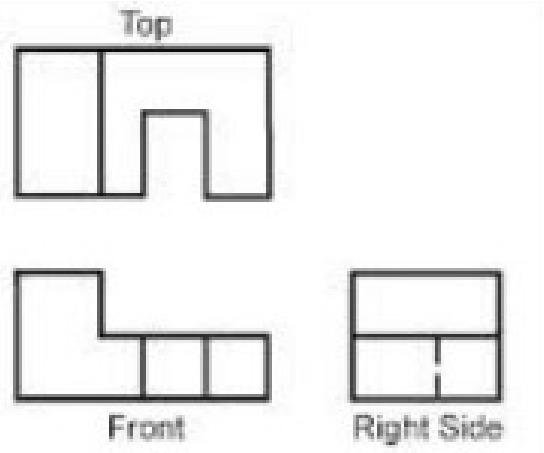


Orthographic views

Assignment for Roll No. 21-40 # 1: Draw the orthographic view of the following object.

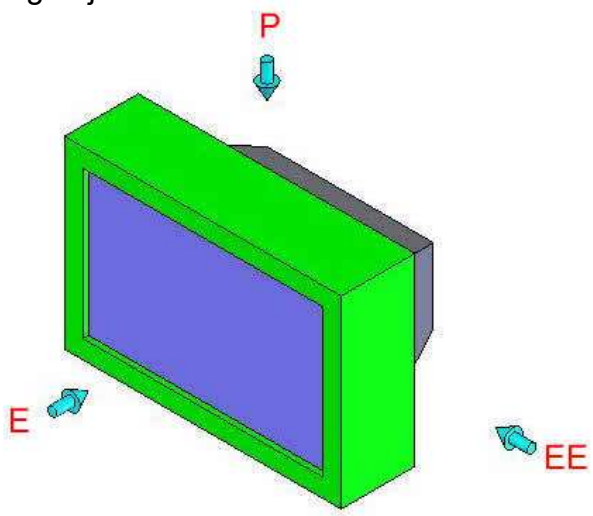


Orthographic views

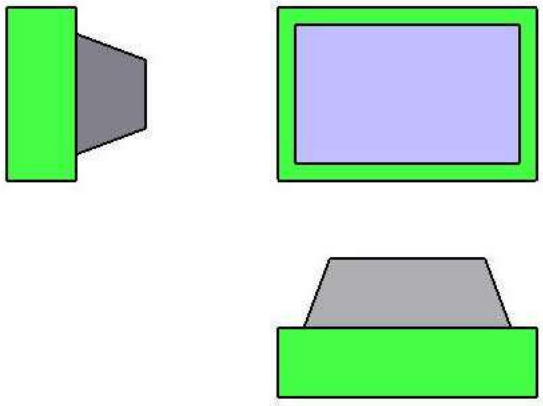


Assignment-1

Assignment for Roll No. 1-20 # 1: Draw the orthographic view of the following object.

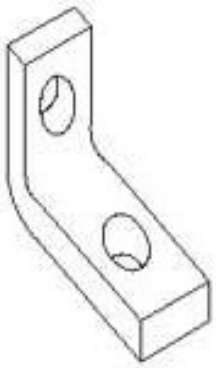


Orthographic views



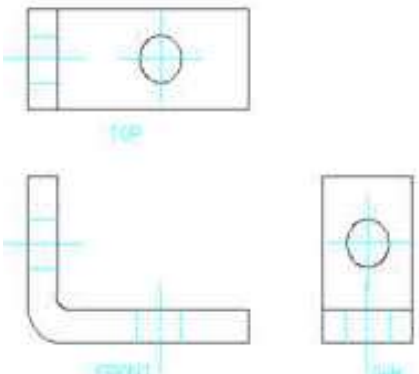
Assignment-1

Assignment for Roll No. 41-60 # 3: Draw the orthographic view of the following object.

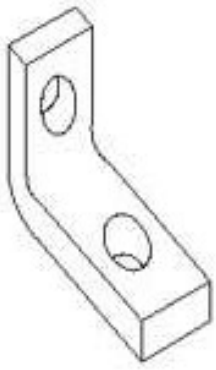


Isometric Projection

Orthographic views

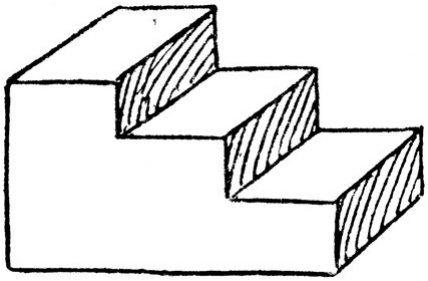


Othorgraphic Projection

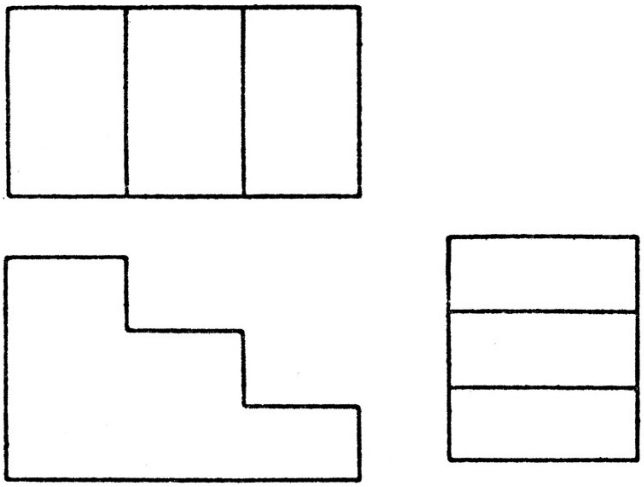


Isometric Projection

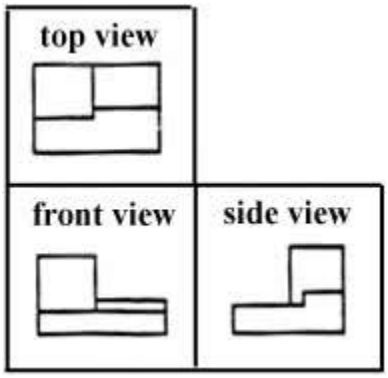
Assignment-1

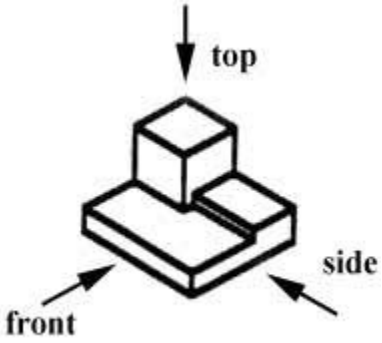


Orthographic views



2D Drawing





THANKS