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18/ENG04/029

ELECT-ELECT

ENG 232

ENGINEERING DRAWING II

Theory


- 1) A sectioned surface on a drawing can be represented by hatching the surface (drawing of parallel lines to show the region the cutting plane cut on the object)
- 2) All dimension, extension and leader lines should be thin, sharp, dark lines
 - i) Dimensions are preferably placed outside the outlines of the views
 - ii) Radial dimensions are given for circular arcs that are less than 180°
 - iii) The dimension figures for radius should be preceded by 'R'
 - iv) Where there are several parallel dimension lines in a group, the dimension figures should be staggered so that they will not interfere with one another
 - v) The extension and dimension lines should not intersect
 - vi) Dimensions should not be repeated unless necessary
- 3) Half section: Half sections are used to show the sectional view of symmetrical object which one half is drawn as the sectional view and the other half shows the outside view of the object.
- i) Full Section: This is when the cutting plane passes completely through an object, splitting the object into two and revealing the interior of the object
- a) Leader lines can be terminated with a tick, dot or arrowhead

5) a) 5:1 means that the dimensions of the drawing are 5 times (5x) greater than the dimension of the original object drawn.

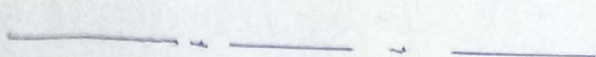
b) 1:10 means that the dimension of the original object were reduced by a factor of 10 in the drawing (original ~~dimension~~^{length} / 10)

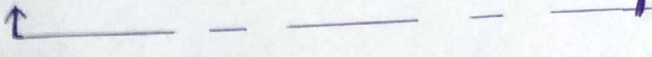
6) Diameter - \varnothing


Radius - R

Square -  (square)

Spherical Radius - SR

Centre line - 

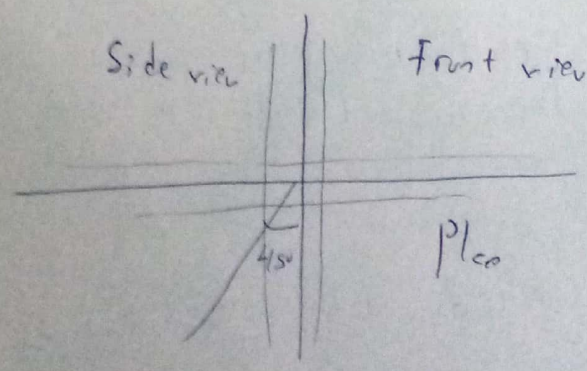
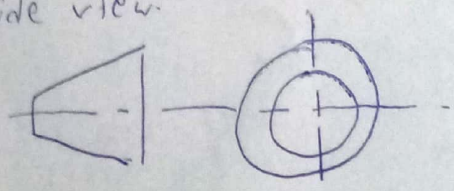
Cutting plane line - 

Long break - 

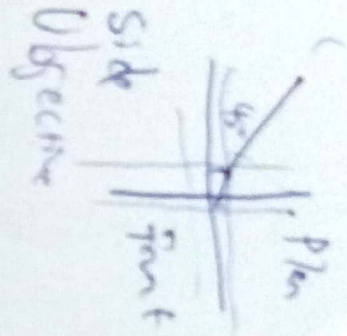
1) Orthographic projection is a means of representing three dimensional objects in two dimensions, it is a form of parallel projection in which all the projection lines are orthogonal to the projection plane. And the object is viewed along parallel lines that are perpendicular to the plane of the drawing. The dimensions (length, thickness, ~~height~~^{width}) should be considered.

8) The projection can be called orthographic if the projections from the object are perpendicular to the projection plane, showing its plan, front and side view.

9) First angle projection



Third angle projection



- 1 C
- 2 A
- 3 A
- 4 A
- 5 A
- 6 A
- 7 C
- 8 B
- 9 A
- 10 A
- 11 C
- 12 A
- 13 C
- 14 C
- 15 D