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T.D Assignment

Theory

- 1) **Section lines** or **cross-hatch lines** are added to a section view to indicate surfaces that are cut by the imaginary cutting plane. Different section line symbols can be used to represent various types of materials. There are different kinds of sectioned view half section, full section etc.
- 2)
 - Dimension and projection lines are narrow continuous lines 0.35 mm thick, if possible, clearly placed outside the outline of the drawing.
 - Arrowheads should be approximately triangular, must be of uniform size and shape and in every case touch the dimension line to which they refer.
 - Bearing in mind the size of the actual dimensions and the fact that there may be two numbers together where limits of size are quoted, then adequate space must be left between rows of dimensions and a spacing of about 12 mm is recommended.
 - Centre lines must never be used as dimension lines but must be left clear and distinct.
 - Dimensions are quoted in millimetres to the minimum number of significant figures. For example, 19 and not 19.0.
 - To enable dimensions to be read clearly, figures are placed so that they can be read from the bottom of the drawing, or by turning the drawing in a clockwise direction, so that they can be read from the right hand side.
 - Leader lines are used to indicate where specific indications apply. The leader line to the hole is directed towards the centre point but terminates at the circumference in an arrow
- 3)
 - A **full section** view is made by passing an imaginary cutting plane fully through an object. The figure shows an imaginary cutting plane passing fully through an object and half of it being removed. In a multiview drawing, a full section view is placed in the same position that an unsectioned view would normally occupy; that is, a front section view would replace the traditional front view

- **Half sections** are created by passing an imaginary cutting plane halfway through an object and one quarter of it is removed. Hidden lines are omitted on both halves of the section view. External features of the part are drawn on the unsectioned half of the view. A center line, not an object line, is used to separate the sectioned half from the unsectioned half of the view. Half section views are most often used on parts that are symmetrical, such as cylinders.

4)

- 5) • Scale 5:1 means the line should be drawn five times more than its original size.
 • Scale 10:1 means the object is 10 times smaller in real life.

— Closed Filled

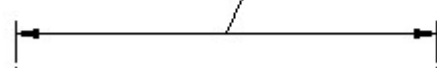
or

— Closed Blank

● Dot

/ Tick

Dimension
Leader



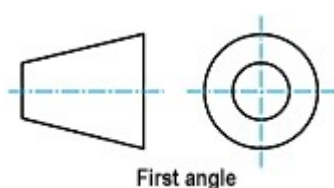
6) Diameter = $\varnothing$

Radius = R

Square = $\square$

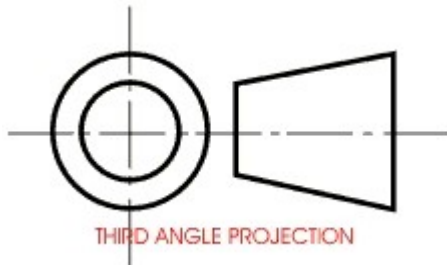
Spherical radius = SR

- 7) Orthographic projection is a means of representing three-dimensional objects in two dimensions. An element to be considered is which view you are drawing it to either Front View, Top view or End view.
- 8) Common method of representing three-dimensional objects, usually by three two-dimensional drawings in each of which the object is viewed along parallel lines that are perpendicular to the plane of the drawing.
- 9) • First angle projection is one of the methods used for orthographic projection drawings and is approved internationally except the United States. In this projection method, the object is



placed in the first quadrant and is positioned in front of the vertical plane and above the horizontal plane.

- Third angle projection the 3D object to be projected is placed in the third quadrant and is positioned behind the vertical plane and below the horizontal plane.



Objective

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