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OBJECTIVES

- 1) Reference plane (A)
- 2) False (B)
- 3) Directly (C)
- 4) 120 degrees(B)
- 5) 60 degrees (A)
- 6) Rivet (B)
- 7) Crowning (C)
- 8) 45 degrees (B)
- 9) A circle (A)
- 10) An ellipse (A)
- 11) Cylinder (C)
- 12) Frustum (D)
- 13) Pivot bearing (C)
- 14) 53 degrees (C)
- 15) Horizontal plane (D)

QUESTIONS

1)By the use of section lining: They are found on most sectional views, and indicate the surface which has been exposed by the cutting plane.

- 2)(i) All dimension, extension, and leader lines should be thin, sharp, dark lines (.5mm/2H).
- (ii) Extension lines indicate the points between which the dimension figures apply. They are drawn perpendicular to the dimension lines, start with a visible gap (~1/32") between them and the object, and terminate 1/8" (3.2 mm) beyond the last arrowhead.
- (iii) Each dimension should be terminated by arrowheads touching the extension lines and pointing in opposite directions. Arrowheads are drawn freehand with .7mm/HB lead. The line should be broken only at the approximate centre for the dimension figures.
- (iv) Dimensions shown with dimension lines and arrowheads should be placed to be read from the bottom of the drawing (unidirectional system).
- (v) All dimensions should be given in decimal format. When dimensions are given in inches, leading zeros are omitted from dimension values less than 1.00.
- (vi) A dimension line should never coincide with an object line or a center line, nor should it be an extension of these lines. Both, however, may be used as extension lines.

3) (a) Half Section: In this view, the cutting plane is assumed to bend at a right angle and cuts through only half of the represented object, not the full length. When the quarter of the object that was cut is removed, the remainder is called a "half section." A half section view is effective only on symmetrical objects, and its main purpose is to show an object's internal and external construction in the same drawing.

(b) Full Section: If the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed, this is called a "full section." A full section is the most widely-used sectional view.

4) Leader lines can be terminated by use of the following types of terminators:

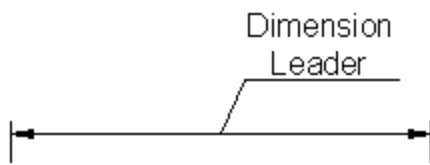
 Closed Filled

or

 Closed Blank

 Dot

 Tick



(i) An arrow terminator is used to point to an edge of an item.

(ii) The dot is used to point to a face.

(iii) The Architectural tick can be used for referring to multiple parallel edges.

(iv) The final type of line has no terminator, and is used for pointing at dimension lines or lines of Symmetry.

5) (a) Scale = 5:1 - A drawing at a scale of 5:1 means that the object is 5 times bigger than in real life scale 1:1. It is 5 times more than its original size.

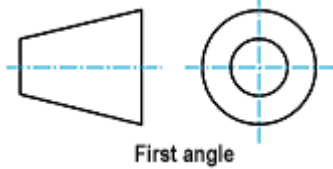
(b) Scale = 1:10 - A drawing at a scale of 1:10 means that the object is 10 times smaller than in real life scale 1:1. You could also say, 1 unit in the drawing is equal to 10 units in real life.

6) (a) Diameter = \varnothing

(b) Radius =

7) Orthographic Projection: Orthographic projection (sometimes referred to as orthogonal projection, used to be called anamlema) 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, resulting in every plane of the scene appearing in affine transformation on the viewing surface.

9) (a) First Angle Projection:



(b) Third Angle Projection:

