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COMPUTER ENGINEERING
18/ENG02/054

TD ASSIGNMENT

1] A section of an object is produced by cutting an object by an imaginary plane, removing one or more parts and thus revealing a view of the effects of the dissection. They are represented by a cut on the drawing elevation.

2a) All dimension, extension and leader line should be thin, sharp and dark lines.

b) Dimensions shown with dimension lines and arrow heads should be placed to the read from the bottom of the drawing.

c) Extension lines indicate the points between which the dimension figures apply.

d) Each dimension should be terminated by arrowheads touching the extension lines and pointing in opposite directions.

e) All dimensions should be given in decimal format

f) When all dimensions on a drawing are given in inches, the inch marks are omitted, the same applies to millimeters.

2g) A dimension line should never coincide with an object line or a centre line, nor should it be an extension of these lines.

3a) Half section: This is a view of an object showing one half of the view in section. The diagonal lines on the section drawing are used to indicate the area that has been theoretically cut. These lines are called section lining or cross-hatching. The lines are more than one more normally drawn at 45° angle to the major outline of the object.

3b) Full section: It is a view of an object where a cutting plane line passes entirely through an object.

4) Leader lines are terminated

a) With a dot, if they are within the outlines of an object

b) With an arrow head, if they are on the outlines of an object.

c) Without dot or arrow head, if they are on a dimension line.

5a) Scale ⇒ 5:1 : This means that the drawing should be five times its original size. The measurement of the line is multiplied by five.

5b) Scale = 1:10 : This means that the drawing is 10 times smaller than its original size.

6a) diameter : ⌀

Radius : R

Square : □

Spherical radius : SR

Centre line : —— - —— - ——

cutting plane line : ——/——

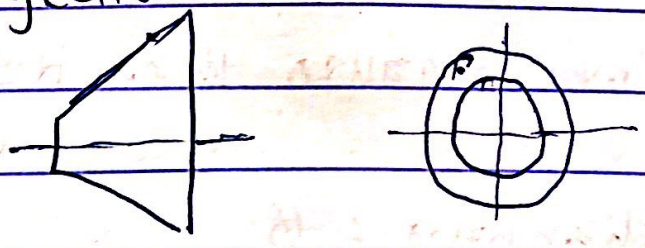
Long break : —— —— ——

7) An orthographic projection is a means of representing three dimensional objects with two dimensional drawings. The elements are the front view, side view and plan view.

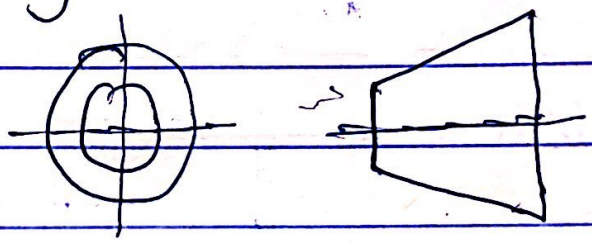
8) It is called an orthographic projection when the figure is drawn in first or third angle deviation.

9) First angle Projection: This is a way of showing a 3D object on a 2D piece of paper and it shows what a part looks like from each direction.

Symbol for first angle projection:



9) Third angle projection is the method of orthographic projection which is a technique in portraying a 3D design using a series of 2D views



Objectives

1) A = Reference Plane
2) B = false
3) C = Directly
4) B = 120°
5) A = 60°
6) B = Rivet
7) C = Crowning
8) B = 45°
9) A = A circle
10) A = An ellipse
11) C = Cylinder
12) A = Cone
13) A = Journal bearing
14) C = 55°
15) D = Horizontal plane.