

RASF UMML - SALMA ONIZE

18FENG08/020

BIOMEDICAL ENGINEERING

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} lines.

2] All dimension, extension, and leader lines should be thin, sharp, dark lines.

b] Dimensions shown with dimension lines and arrowheads ^{should} be placed to be 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 millimetres.

3] A dimension line should never coincide with an object line or a center 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 sections. ~~as~~ ^{The} diagonal lines on the section drawing are used to indicate the area that has been theoretically cut. These

lines are called section line or cross-hatching. The lines are thin and are usually drawn at a 45° angle to the major outline of the object.

b] Full-section:-

A full-section is a view of an object when a cutting plane line passes entirely through an object.

Header lines are terminated by an arrowhead touching the feature of it dimensions

5] Scale = 5:1

This means that the drawing should be five ~~more~~ ^{times} more than its original size. The measurement of the line is multiplied by five.

6] 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

Header lines are terminated a) with a dot, if they end within the outlines of an object.

b) with an arrow head, if they end on the outline of an object

c) without dot or arrow head; if they end on a dimension line

a) diameter: \varnothing

→ Radius: R

→ Square: \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.

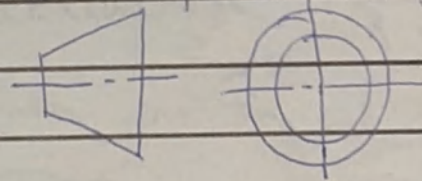
The elements are the front view, side view and plan view.

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

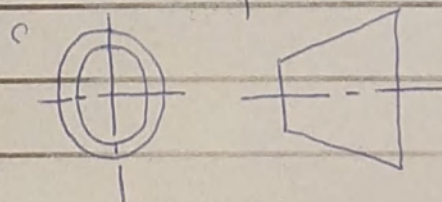
9] First angle projection:-

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



b] Third angle projection: is the opposite of first angle projection. This is a method of orthographic projection which is a technique in portraying a 3D design using a series of 2D views.



R 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.] ~~A = Cone~~ C = Cylinder

12.] A = Cone

13.] A = journal bearing

14.] C = 55°

15.] D = Horizontal plane