**NAME: OGUNKUADE AYOBAMIDELE**

**MATRIC NO: 19/ENG02/079**

**DEPARTMENT: COMPUTER ENGINEERING**

**COURSE: ENGINEERING DRAWING**

**COURSE CODE: ENG 232**

## THEORY

### QUESTION 1:

A sectioned surface on a drawing are represented on a drawing using cutting lines, to show that it's been sectioned.

_____ __ _____ ____

### QUESTION 2:

- Dimension and projection lines are narrow continuous lines 0.35 mm thick, if possible, clearly placed outside the outline of the drawing.

- The projection lines should not touch the drawing but a small gap should be left, about 2 to 3 mm, depending on the size 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.

- 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.

- Start by dimensioning the view which gives the clearest understanding of the profile or shape of the component.

- If space permits, and obviously this varies with the size and degree of complexity of the subject, place the dimensions outside the profile of the component as first choice.

- Where several dimensions are placed on the same side of the drawing, position the shortest dimension nearest to the component and this will avoid dimension lines crossing.
- Try to ensure that similar spacing's are made between dimension lines as this gives a neat appearance on the completed drawing.
- Overall dimensions which are given for surfaces that can be seen in two projected views are generally best positioned between these two views.

**QUESTION 3:**

Half-Sections:

A half-section 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.

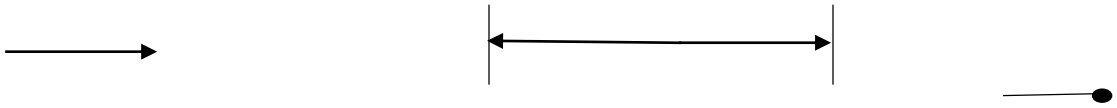
Full-Sections:

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.

**QUESTION 4:**

A leader line is a line that establishes a connection between a graphical representation of an item and some text.

Leader lines are terminated in **ARROWHEAD or DOTS**



**QUESTION 5:**

**(a):** Scale = 5:1

A 50mm line is to be drawn at a scale of 5:1 (i.e. 5 times more than its original size). The measurement 50mm is multiplied by 5 to give 250mm. A 250mm line is drawn.

It also multiplying the measurement by the number in the front to give a bigger drawing.

**(b):** Scale = 1:10

This means that 1unit in the drawing will represent 10units in the real life measurement. This is used when making a smaller drawing.

**QUESTION 6:**

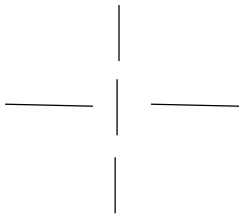
**(a):** Diameter-⌀

**(b):** Radius-**R**

**(c):** Square- sqr

**(d):** Spherical radius--**S**⌀

**(a)** Center line-



**(b)** Cutting plane line-

**(c)** Long break- ——— ——— ——— ——— ———

**QUESTION 7:**

**Elements to be considered in projection**

- Orthographic projection
- Isometric projection
- Oblique projection
- Axonometric projection

**ORTHOGRAPHIC PROJECTION:** Orthographic projection (sometimes referred to as orthogonal projection, used to be called Ana lemma) 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. The obverse of an orthographic projection is an oblique projection, which is a parallel projection in which the projection lines are not orthogonal to the projection plane.

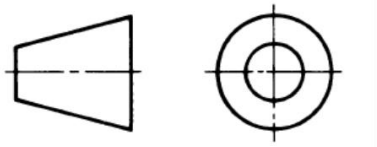
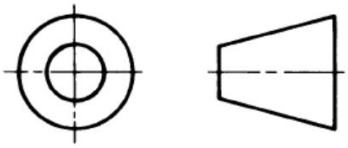
**QUESTION 8:**

If the drawings are placed in a way that they from for quadrant while drawing, it is called orthographic projection.

**QUESTION 9:**

**(a): First angle projection:** First angle projection is a way of representing drawings in the first quadrant.

**(b): Third angle projection:** Third angle projection is a way of representing drawings in the third quadrant.

| Projection | Symbol |
|---|---|
| First angle |  |
| Third angle |  |

**OBJECTIVES:**

1. (c) Normal plane
2. (a) True
3. (b) Equally
4. (b) 120
5. (a) 60
6. (b) Rivet
7. (c) Crowning
8. (b) 45
9. (a) Circle
10. (a) An ellipse
11. (c) Cylinder
12. (a) Cone
13. (c) Pivot bearing
14. (c) 55
15. (d) Horizontal plane