NAME: ABIOYE FOLAWIYO ABDUL-AZEEM

MATRIC NO: 18/ENG03/002

DEPARTMENT: CIVIL ENGINEERING

COURSE: ENGINEERING DRAWING

COURSE CODE: ENG 232

ENG 232 MCQ & THEORY

1. **How do you represent a sectioned surface on a drawing?**

ANS;

When sketching an object or part that requires a sectional view, they are drawn by eye at an angle of approximately 45 degrees, and are spaced about 1/8 apart. Since they are used to set off a section, they must be drawn with care. It is best to use the symbol for material being shown as a section on a sketch.

2. **List out the various principles to be followed while dimensioning a drawing.**

ANS;

- *The dimensions should be given on such view which illustrates the true shape and size of an object.*
- *As far as possible the dimensions should be given outside a view but can be given inside as well if unavoidable.*
- *All the dimensions are given in group form. Scattering of these is not correct.*
- *The dimensions should be intelligibly written.*
- *All the dimensions should be written parallel to the object line and the numbers should be written such that they could be read easily.*
- *The extension and dimension lines should not intersect in any case.*

3. **Explain the terms, (*a*) half section, (*b*) Full section**

ANS;

(a) **HALF SECTION:** *This is a view of an object showing one-half of the view in the section, the diagonal lines on the section drawing are used to indicate the area that has been theoretically cut.*

(b) **FULL SECTION:** *This is when the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed.*

4. **How are leader lines terminated?**

ANS;

Leader lines are terminated by the use of ***arrow heads****, on the outline of an object (edge).*

Leader lines can also be terminated; with ***a dot within the outline of the object (surface)****,* ***without a dot or an arrow head*** *on a dimension line.*

5. **What do you understand by, (a) scale = 5:1 and (b) scale = 1:10?**

ANS;

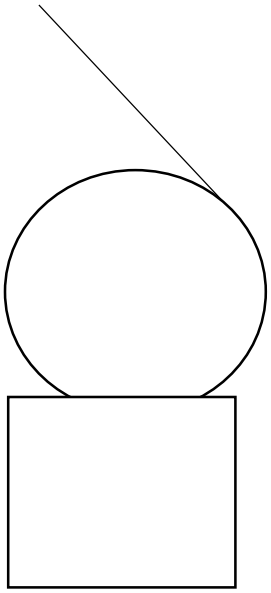
(a) Means a 50mm line is to be drawn at a scale of 5:1(ie 5 times more than its original size).

(b) This scale means that the object is 10 times smaller than in real life.

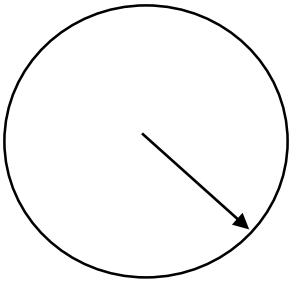
6. Give the shape identification symbols for the following: (*a*) diameter, (*b*) radius, (*c*) square and (*d*) spherical radius.

***(e)*Centre line, (*f*) cutting plane line and (*g*) long break**

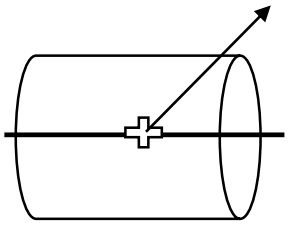
ANS;



(c) Square

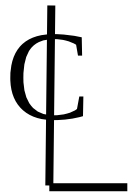


(b)radius



(d) spherical radius

(e) Centre line



(f) cutting plane lines

(g) Long break

7. What are the elements to be considered while obtaining a projection and what is an orthographic projection?

ANS;

This is a method of projection in which an object is depicted using parallel lines to project its outline on to a plane. ***An orthographic projection is a 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. For example, an orthographic projection of a house typically consists of a top view, or plan, and a front view and one side view (front and side elevations).***

It should comply with relevant standards (such as British Standards) to prevent misunderstanding and avoid errors in interpreting the drawing.

8. When is a projection of an object called an orthographic projection?

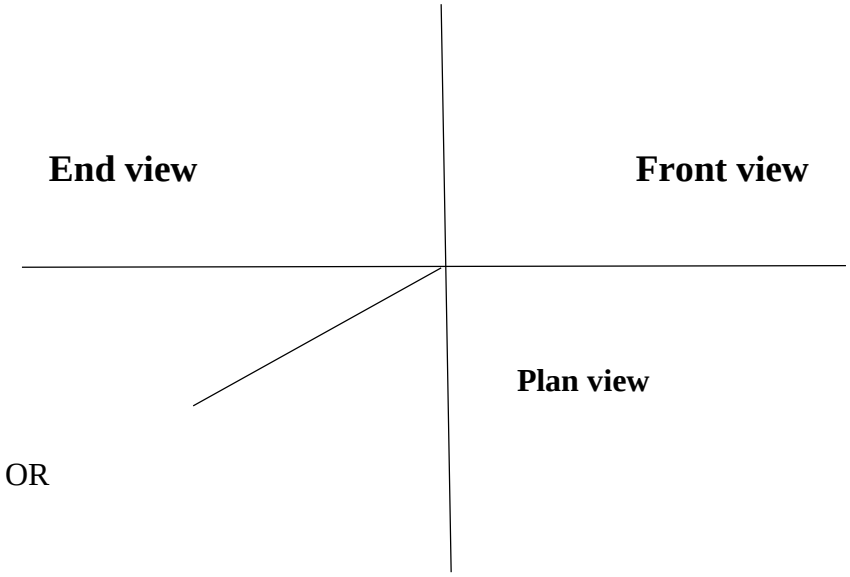
ANS;

When the line are orthogonal to the projection plane, resulting in every plane of the scene appearing on the viewing surface.

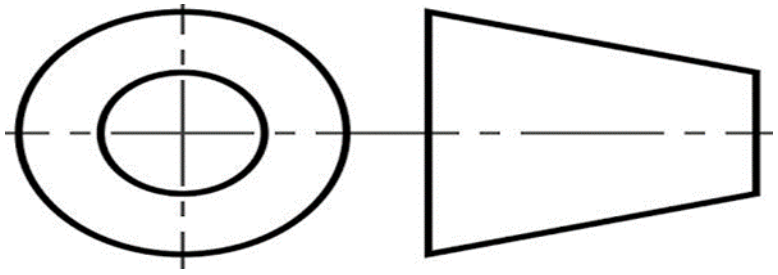
9. Explain the following, indicating the symbol to be used in each case: (*a*) First angle projection, (*b*) Third angle projection

ANS;

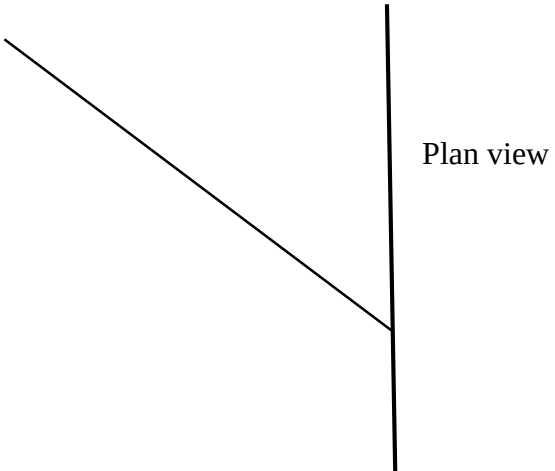
(a) First angle projection: a method of creating a 2D drawing of a 3D object.



OR

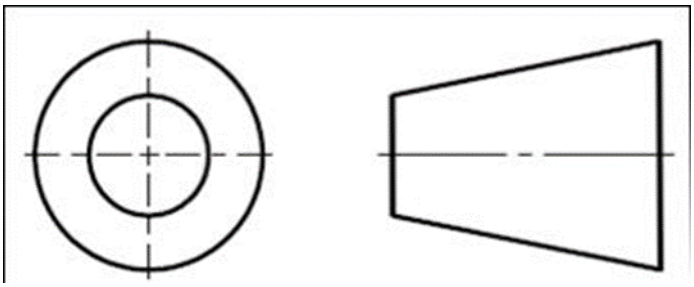


(b) Third angle projection: this is used to portray a 3D design using a series of 2D views



Side view Front view

OR



Objectives

1. To project the auxiliary view, an imaginary plane known as …….

   a) <u>Reference Plane</u>

   b) Principle plane

   c) Normal plane

   d) Inclined plane **<u>ANS: A</u>**

2. Reference plane is parallel to the direction of view

a) True

b) <u>False</u> **<u>ANS: B</u>**

3. Dimension of one side of the inclined surface can be……projected on the reference plane

a) Indirectly

b) Equally

c) <u>Directly</u>

d) Normally **<u>ANS: C</u>**

4. In isometric projection the three edges of an object are inclined to each other at

(a) 60^o (b) **<u>120^o</u>** (c) 100^o (d) 90^o **<u>ANS: B</u>**

5. The angle between the flanks of a metric thread is

(a) **<u>60^o</u>** (b) 90^o (c) 75^o (d) 55^o **<u>ANS: A</u>**

6. Which one among the following represents a permanent fastener

a) Nut b) **<u>Rivet</u>** c) Screw d) Bolt **<u>ANS: B</u>**

7. The convexity provided on the rim of the solid web cast iron pulley is called

a) Bending b) Curving **<u>c) Crowning</u>** d) Riveting **<u>ANS: C</u>**

8. Section lines are generally inclined with the base, at an angle of

a) 30^o **<u>b) 45^o</u>** c)60^o d)90^o **<u>ANS: B</u>**

9. The isometric view of a sphere is always

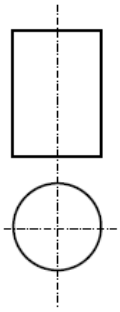
a) A circle b) an ellipse c) a Parabola d) a Semicircle **ANS: A**

10. In isometric projection, the four center method is used to construct

a) An ellipse b) a square c) a triangle d) a rectangle **ANS: A**

11 **ANS: (C) cylinder**

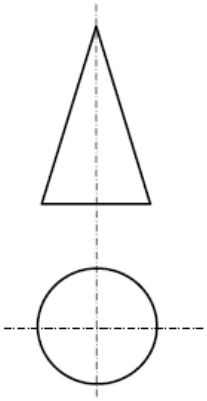
(i) With respect to the elevation and plan given below, name the solid



(a) Cone
(b) hexagonal prism
(c) cylinder
(d) hexagonal pyramid

12. **ANS: (a) Cone**

(v) With respect to the front view and top view given below, name the solid



(a) Cone
(b) Cylinder
(c) Cube
(d) Frustum

13. A footstep bearing is a

a) Journal bearing b) thrust bearing c) pivot bearing **d) pedestal bearing** **ANS: D**

14. The angle between the flanks of B.S.W. thread is

a) 60^o b) 65^o **c) 55^o** d)75^o **ANS: C**

15. Top view is projected on the

a) Vertical Plane b) Corner Plane c) Side Plane **d) Horizontal Plane** **ANS: D**