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MATRIC NUMBER: 18/ENG02/080

DEPARTMENT: COMPUTER ENGINEERING

COURSE: ENGINEERING DRAWING 2

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

   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.

   - **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

Half Section : Half sectional views are used when an object is symmetrical **(the same either side of the centre line). One half is used as a sectional view to show the inside and the other half shows the outside view.**
The cutting plane only removes a quarter of the object.

Full Section : When the cutting plane is right across the object it results in a full sectional view (commonly referred to as a full section)

4. How are leader lines terminated?

   Leader lines are terminated by the use of arrow heads.

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

- **Means a 50mm line is to be drawn at a scale of 5:1**
- **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. Centre line, (*b*) cutting plane line and (*c*) long break

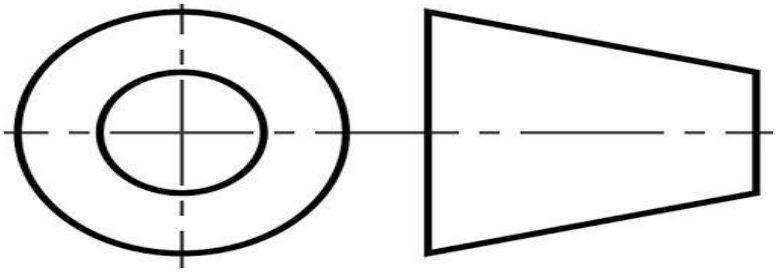
7. What are the elements to be considered while obtaining a projection and what is an orthographic projection?

   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).

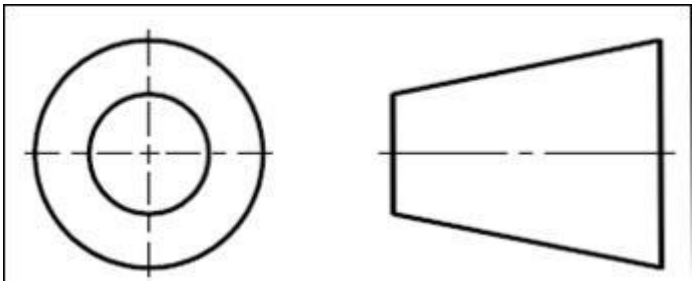
   It should comply with relevant standards (such as British Standards) to prevent misunderstanding and avoid errors in interpreting the drawing.

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

- **First angle projection is a method of creating a 2D drawing of a 3D object.**



- **Third angle projection the object is placed below and behind the viewing planes meaning the plane of projection is between the observer and the object.**



Objectives

1. To project the auxiliary view, an imaginary plane known as …….
   a) **Reference Plane**
   b) Principle plane
   c) Normal plane
   d) Inclined plane
2. Reference plane is parallel to the direction of view

a) True

b) False

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

a) Indirectly

b) Equally

c) Directly

d) Normally

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

(a) 60^o (b) **120^o** (c) 100^o (d) 90^o

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

(a) **60^o** (b) 90^o (c) 75^o (d) 55^o

6. Which one among the following represents a permanent fastener

a) Nut b) **Rivet** c) Screw d) Bolt

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

a) Bending b) Curving c) **Crowning** d) Riveting

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

a) 30^o b)**45^o** c)60^o d)90^o

9. The isometric view of a sphere is always

a) **a circle** b) an ellipse c) a Parabola d) a Semicircle

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

a) **an ellipse** b) a square c) a triangle d) a rectangle

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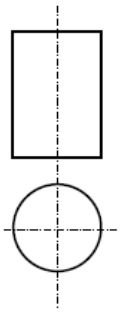
(i) With respect to the elevation and plan given below, name the solid

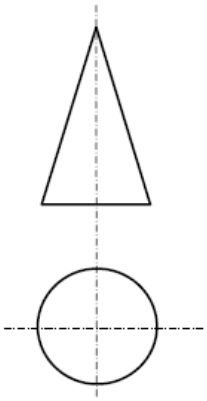


(a) Cone
(b) hexagonal prism
(c) cylinder
(d) hexagonal pyramid

11. Cylinder

12. 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**

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

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

15. Top view is projected on the

a) Vertical Plane b) Corner Plane c) Side Plane d) **Horizontal Plane**