

ENG 232 QUESTIONS

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

**ANSWER: A sectioned surface on a drawing is represented by a cut on the drawing elevations which are plan, front and end; usually with long-short dash lines. Drawings are represented using sectioning lines inclined at 45 degrees**

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

**ANSWER: A.No line of the drawing should be used as a dimension line or coincide with a dimension line.**

**B. Dimensions should be attached to the view that best shows the contour or shape of the feature being dimensioned.**

**C. Wherever possible, avoid dimensioning to hidden lines**

**. D. Avoid dimensions over or through the drawing.**

**E. Wherever possible locate dimensions in adjacent views**

**F. Holes are located by their centerlines, which may be extended and used as an extension line G. Holes should be located and sized in the view that shows that feature as a circle**

**. H. Dimension line should never cross other dimension lines.**

**I. Each dimension should be given clearly, so that it can be interpreted in one way.**

**J. Dimension lines should be uniformly spaced throughout the drawing.**

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

**Half section: . A half section is a section in which the cutting plane is passed halfway through an object, and one quarter of the object is removed.**

**Full section: It involves the cutting plane line passing completely through the entire drawn object, splitting it into two with the interior of the object revealed through the part.**

4. How are leader lines terminated?

**ANSWER: They can be terminated using dots and arrow heads. Also at the center of the work. Use arrowheads to terminate leader lines at the outline of an object. Use dots to terminate leader lines within the outline of the drawn object or on the surface of the object.**

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

**ANSWER: scale 5:1 means : This means an object should be drawn 5 times more than its original size.**

**Scale 1:10 means: An object should be drawn 10times smaller than its original size.**

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

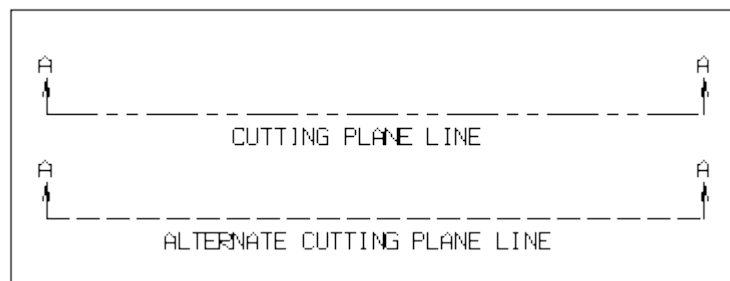
a) Diameter:  $\Phi/D$

b) Radius: R

c) Square: 

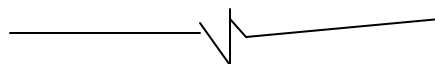
d) Spherical radius: SR

(a) Centre line: — — — — —



(b) , (b) cutting plane line:

(c) (c) long break:



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

**ANSWER: Front view, side and plan view. The object, the plane**

**Orthographic projection:** method of projection in which an object is depicted using parallel lines to project its outline onto a plane

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

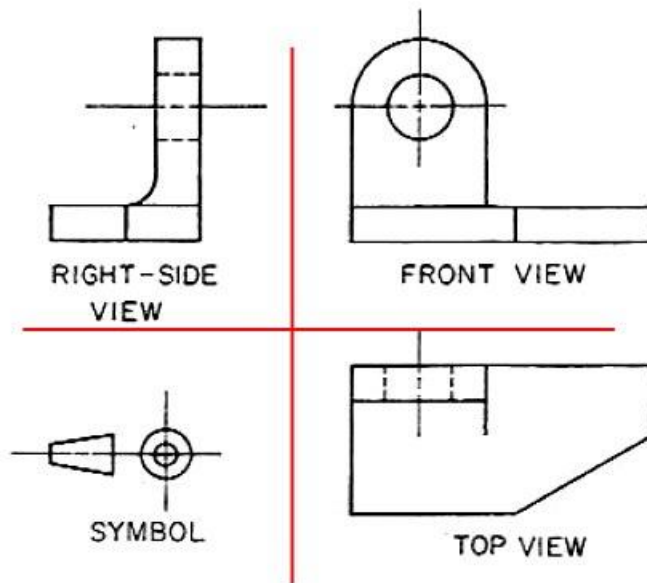
**ANSWER:**

**A projection of an object is said to be orthographic when drawn using the first angle projection or third angle projection.**

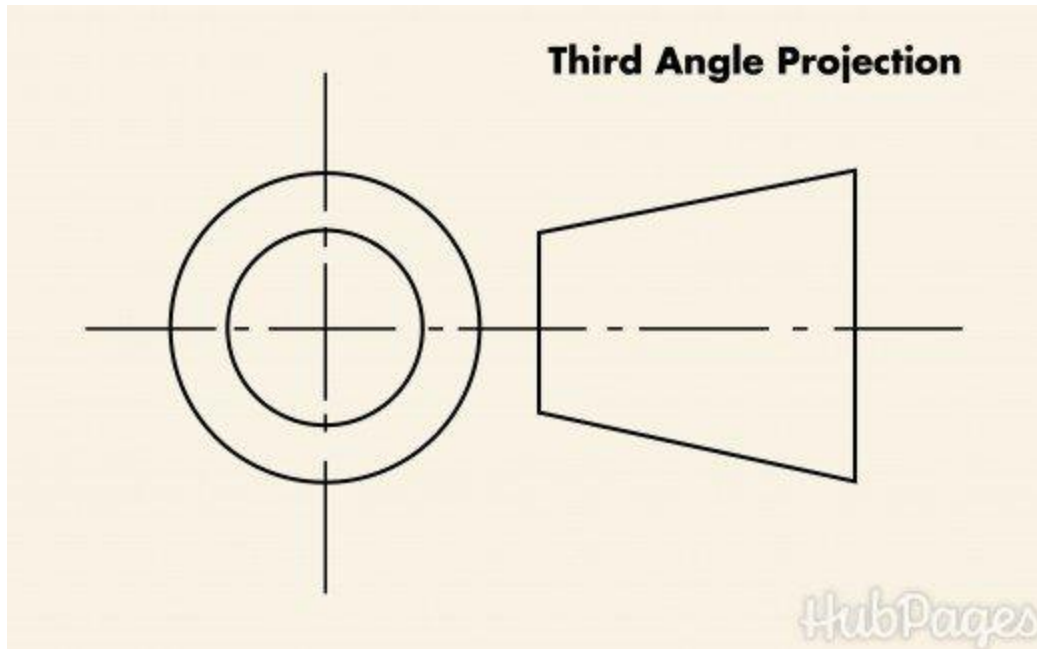
9. Explain the following, indicating the symbol to be used in each case:

**(a) First angle projection,:** First Angle is one of the ways of representing 3D objects with respect to two dimension in which the object is placed in the first quadrant.

**(b) Third angle projection:** the 3D object to be projected is placed in the third quadrant and is positioned behind the vertical plane and below the horizontal plane.



First angle projection



### Objectives

1. To project the auxiliary view, an imaginary plane known as .....A.....
  - 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)  $60^\circ$  **(b)  $120^\circ$**  (c)  $100^\circ$  (d)  $90^\circ$

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

(a)  **$60^\circ$**  (b)  $90^\circ$  (c)  $75^\circ$  (d)  $55^\circ$

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)  $30^\circ$  **b)  $45^\circ$**  c)  $60^\circ$  d)  $90^\circ$

9. The isometric view of a sphere is always

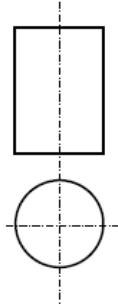
**a) a circle** b) an ellipse c) a Parabola d) a Semicircle

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

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

**11. CYLINDER ©**

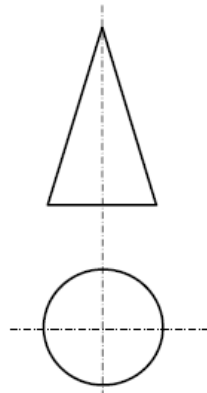
(i) With respect to the elevation and plan given below, name the solid



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

**12. 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° b) 65° **c) 55°** d) 75°

15. Top view is projected on the

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

