ENG 232 QUESTIONS

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

   By making use of section lines e.g. hatching.

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

   i.   All dimensions, extensions, and leader lines should be thin, sharp, dark lines.

   ii.   Dimensions shown with dimension lines and arrowheads should be placed to be read from the bottom of the drawing (unidirectional system).

   iii.   A dimension line should never coincide with an object line or center line.

   iv.   A dimension line shouldn't be an extension of an object line or center line.

   v.   Crossing of extension lines or dimension lines should be avoided.

   vi.   All dimensions should be given in in decimal format.

   vii.   Where there are several parallel dimension lines in a group, the dimension figures should be staggered so that they will not interfere with one another.

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

   a. Half section: The section is made by passing the cutting plane halfway through an object and remove a quarter of it.

   b. Full section: The section is made by passing the straight cutting plane completely through the part.

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

   By making use of arrow heads

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

   a. Scale = 5:1 means the drawing would be 5 times more than the size of the real object.

   b. Scale = 1:10 means the drawing would be 10 times less than the size of the real object.

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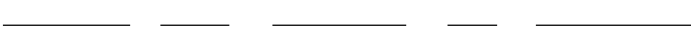
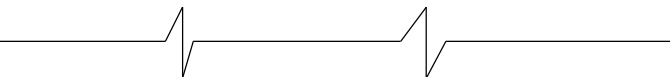   a. Diameter = ∅

   b. Radius = R

   c. Square = ☐

   d. Spherical radius = SR

(a) **Centre line, (*b*) cutting plane line and (*c*) long break**

   a. Centre line = ———— ——— ———— ——— ————

   b. Cutting plane =

   c. Long break =

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

   The elements to be considered are the dimensions of the front view, side view and plan.

   Orthographic projection: It is a means of representing three-dimensional objects in two dimensions.

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

   Projections from the object are perpendicular to the projection plan.

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

   a. First angle projection: An orthographic projection whereby the object is placed in the first quadrant and is positioned in front of the vertical plane and above the horizontal plane.
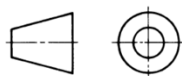
b. <u>Third angle projection:</u> An orthographic projection whereby the object is placed in the third quadrant and is positioned behind the vertical plane and below the horizontal plane.
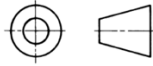
Objectives

1. To project the auxiliary view, an imaginary plane known as **b.) Principle plane**

2. Reference plane is parallel to the direction of view **b.) False**

3. Dimension of one side of the inclined surface can be c**.) directly** projected on the reference plane

4. In isometric projection the three edges of an object are inclined to each other at **b.) 120°**

5. The angle between the flanks of a metric thread is **a.) 60°**

6. Which one among the following represents a permanent fastener **b) Rivet**

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

8. Section lines are generally inclined with the base, at an angle of **b)45°**

9. The isometric view of a sphere is always **a) a circle**

10. In isometric projection, the four center method is used to construct **a) an ellipse**

11 **c.) cylinder**

12 **a.) cone**

13. A footstep bearing is a **a) journal bearing**

14. The angle between the flanks of B.S.W. thread is **c) 55°**

15. Top view is projected on the **d) Horizontal Plane**