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#### MATRIC NO: 18/ENG02/058

## DEPARTMENT: COMPUTER ENGINEERING

## COURSE: ENG 232

## TITLE: ENGINEERING DRAWING

- 1. By using section lines which are inclined at angle 45°
- 2.
- (a) Overall dimensions should be placed the greatest distance away from the object so that intermediate dimension can nest closer to the object to avoid crossing extension lines.
- (b) Never cross extension lines.
- (c) Never cross dimension lines.
- (d) Holes should be located in the view that shows the feature as a circle.
- (e) Holes should be located by their center lines.
- (f) In general, a circle is dimensioned by its diameter, an arc by its radius.
- (g) Avoid dimensioning to hidden lines wherever possible.
- (h) Dimensions should not be duplicated, or the same information be giving in two different ways.
- (i) No unnecessary dimensions should be used only those needed to produce or inspect the part.
- (j) Dimensions should not be placed on the object unless that is the only clear option.
- 3. Half-section: A half section is a view of an object showing one half of the view in section. Symmetrical parts can be shown in half sections. Half sections are commonly used to show both the internal and outside view of symmetrical objects. The cutting plane is off set to include features that are not in a straight line.

(b) Full section: 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.

4. A leader line also has a terminator and some text. A leader line may have a reference line under the text. An arrow terminator is used to point to an edge of an item. The dot is used to point to a face. The Architectural tick can be used for reforming to multiple parallel edges.

5. (a) 5:1 scale: This is an enlargement scale used for enlarging the object 5 times its original size.

(b) 1:10 scale: This is a reducing scale used to reduce the object 10 times its original size

- 6. (a) Φ
  - (b) R
  - (C)
  - (d) SR
- 7. (a) Front view
  - (b) SIDE VIEW
  - (c) The plan

An orthographic drawing is a clear, detailed way to represent the image of an object.

- 8. It is called orthographic projection when the principle planes or axes of an object in an orthographic projection are not parallel with the projection plane.
- 9. (a) 1<sup>st</sup> Angle projection: It is a method of creating a 2D drawing of a 3D object. It is mainly used in Europe and Asia and has not been officially used in Australia for many years. In Australia, third angle projection is the preferred method of orthographic projection. Note the symbol for first angel orthographic projection.

(b) 3<sup>RD</sup> Angel projection: is a method of orthographic projection are 2D representations of 3D objects. Features of 3D parts are presented on a flat plane, as though the outlines of the part had been projected onto a screen.



**Objective Answer** 

- 1. **C**
- 2. A
- 3. **B**
- 4. B
- 5. A
- 6. B

- 7. C 8. B 9. A 10. A 11. C 12.A 13.C 14. C 15. D