

Engineering Graphics - Module 1 Notes

Topics Covered

- Principles of Engineering Graphics
- Drawing Instruments
- Lettering
- Conic Sections
- Rectangular Hyperbola
- Cycloid
- Epicycloid
- Hypocycloid
- Involute
- Plain, Diagonal and Vernier Scales

Engineering Graphics

Engineering Graphics is the language of engineers used to represent technical ideas through drawings.

Importance

1. Technical communication
2. Accurate representation
3. Used in design and manufacturing

Drawing Instruments

1. Drawing Board
2. T-Square
3. Set Squares
4. Compass
5. Divider
6. Protractor
7. Scale

Lettering

Lettering means writing alphabets and numbers in standard style on drawings.

Conic Sections

1. Circle
2. Ellipse
3. Parabola
4. Hyperbola

Cycloid

Curve generated by a point on a circle rolling on straight line.

Epicycloid

Curve generated by a circle rolling outside another circle.

Hypocycloid

Curve generated by a circle rolling inside another circle.

Involute

Curve generated by unwinding a string from a circle.

Scales

1. Plain Scale
2. Diagonal Scale
3. Vernier Scale

Representative Fraction

R.F. = Drawing Length / Actual Length

Important Questions

1. Explain Engineering Graphics and its importance.
2. Explain drawing instruments with uses.
3. Draw rectangular hyperbola.
4. Draw cycloid, epicycloid and hypocycloid.
5. Draw involute of circle.
6. Construct plain, diagonal and vernier scales.