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Engineering Drawing





Simtel Engineering Drawing covers all the essential topics, it is accommodated with three dimensional animations which help students to visualize the objects in the positions asked in the questions. Drawings have been drawn in correct sequences with neat and clean sketches and steps of how to draw it. This software can be used as a teaching and training tool and is beneficial for students but teachers both.

Topic

Scales

- Plain Scale
- Diagonal Scale
- Comparative Scale
- Vernier Scale
- Scale of Chords

Curves used in Engineering

- **Conic Sections**
- Ellipse
- ParabolaHyperbola
- Tangant-
- Tangents and Normals to Conics
- Cycloidal curves
- Cycloid
- Trochoid
- Epicycloid and Hypocycloid
- EpitrochoidHypotrochoid
- nypotroch

Evolutes

Spirals

- Archemedian Spiral
- Logarithmic or Equiangular Spiral

Helix

- Helical Curve
- Helical Springs
- Helix upon a Cone
- **Methods of Projection**
 - Four Quadrants
 - Orthographic Projection
 - First Angle Projection
 - Third Angle Projection

Projections of Points

- Point in First Quadrant
- Point in second Quadrant
- Point in third Quadrant
- Point in fourth Quadrant

Projections of Straight Lines

- Line parallel to one or both planes
- Line contained by one or both planes
- Line perpendicular to one of the planes
- Line inclined to one plane and parallel to other
- Line inclined to both planes
- Line contained by a plane perpendicular to both reference planes
- Traces of a Line

Projections of Planes Shapes of Planes Types of Planes

- Perpendicular Planes
- Oblique Planes

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Traces of Planes

- Projections of planes parallel to one of the reference planes
- Plane parallel to VP (Perpendicular to HP)

• Plane parallel to HP (Perpendicular to HP) Projections of planes inclined to one of the reference planes and perpendicular to other

- Plane inclined to VP perpendicular to HP
- Plane inclined to HP perpendicular to VP
- Projections of plane perpendicular to both planes

Projection of plane inclined to both planes Projections of Solids

Types of Solids

- Polyhedron
- Prims
- Pyramid
- Solids of revolutions
- Projections of Solids in simple positions
- Projection of solid having axis perpendicular to HP
- Projection of solid having axis perpendicular to VP

Projections of Solids with axes inclined to one plane and parallel to other

- Projections of solids having axis parallel to VP and inclined to HP
- Projections of solids having axis parallel to HP and inclined to VP

Projection of Solids having axes inclined to both the planes

Sections of Solids

Sections of Prisms

- Section plane parallel to VP
- Section plane parallel to HP
- Section plane perpendicular to HP inclined to VP
- Section plane perpendicular to VP inclined to HP

Sections of Pyramids

- Section plane parallel to the base of pyramid
- Section plane parallel to VP
- Section plane perp to VP and inclined to HP
- Section plane perp to HP and inclined to VP

Sections of Cylinders

- Section plane parallel to the base
- Section plane parallel to the axis
- Section plane inclined to the base

Sections of Cone

- Section plane parallel to base of Cone
- Section plane passing through apex of Cone
- Section plane parallel to a generator of Cone

Development of Surfaces

- Development of Prisms
- Development of Cylinder
- Development of Cone
- Development of Pyramid

Intersection of Surfaces

- Intersection of two Prisms
- Intersection of two Cylinders
- Intersection of Prism and Cylinder
- Intersection of Cone and Cylinder
- Intersection of Cone and Prism
- Intersection of Cone and Cone

Isometric Projection

- Introduction
- Isometric drawing of a Plane Figures
- Isometric drawing of Prism
- Isometric drawing of Pyramid
- Isometric drawing of Cylinder
- Isometric drawing of Cone
- Isometric drawing of Sphere

