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| **B. TECH 1st SEMESTER** | **T** | **P** | **C** |
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| **ENGINEERING DRAWING** |

**COURSE OBJECTIVE:-**

To make the students understand the basics of Engineering Drawing and get familiar with Geometrical Constructions and Engineering Plane Curves. The student should familiar with Projections of Points, Lines, Planes, and Solids and with Isometric Projections.

 **UNIT – I:**

**INTRODUCTION:** Engineering Drawing and Plane Curves, Use of Drawing Instruments and Conventions.

**GEOMETRICAL CONSTRUCTIONS:** Constructions of Polygons using General Method-

**CONICS:** Construction of Ellipse, Parabola and Hyperbola by Eccentricity Method.

**CYCLOIDAL CURVES:** Construction of Cycloid, Epi-Cycloid and Hypo-Cycloid.

**UNIT – II:**

**PROJECTIONS OF POINTS AND LINES:** Introductionto Orthographic Projections - Projection of Points, **PROJECTION OF STRAIGHT LINES:** Parallel to both the Planes, Parallel to One Plane and Inclined to Other Plane, Inclined to Both the Planes.

**UNIT – III:**

 **PROJECTIONS OF PLANES:** Introduction to Perpendicular Planes, Perpendicular to both the Reference Planes, Perpendicular to One Plane and Parallel to Other Plane, Perpendicular to One Plane and Inclined to Other Plane, Inclined to Both the Reference Planes.

**UNIT – IV:**

**PROJECTIONS OF SOLIDS:** Projections of Simple Solids like Prism, Cylinder, Pyramids and Cones. Projections of Solids with Axis Perpendicular to one Plane, Projections of Solids with Axis Parallel to Both the Planes.

**UNIT – V:**

**PROJECTIONS OF SOLIDS – AXIS INCLINED TO ONE PLANE:** Projections of Solids with Axis inclined to one plane Parallel to other Plane, Axis inclined to the VP and Parallel to the HP, Axis Inclined to the HP and Parallel to the VP.

**UNIT – VI:**

**ISOMETRIC PROJECTIONS:** Principles of Isometric Projections - Isometric Scale, Isometric Projections of Planes, Simple Solids, Conversion of Isometric to Orthographic Views and Vice Versa.

**TEXT BOOKS:**

1) Engineering Drawing by K.L. Narayana & P. Khannaiah., SCIETECH Publishers.

2) Engineering Drawing by M.B. Shah & B.C. Rana., Pearson’s Publishers.

**REFERENCE BOOKS:**

1) Engineering Drawing by N.D. Bhatt, Charotar Publishers.

2) Engineering Drawing by K. Venugopal., NEW AGE Publications.