Engineering Drawing

F.E. Sem. II

EVALUATION SYSTEM

	Time	Marks
Theory Exam	3 Hrs.	75
Practical Exam	2 Hrs.	50
Oral Exam	–	–
Term Work	–	25

SYLLABUS

1. **Introduction :**
   Drawing Instruments, symbolic lines, lettering, dimensioning, systems as per I.S. conventions, geometrical constructions and tangential arcs.

2. **Projections :**
   - Projections of points and lines inclined to both the reference planes including HT and VT.
   - Projections of right regular solids (cube, prism, pyramid, cylinder and cone) inclined to both HP and VP (excluding spheres, hollow and composite solids).
   - Development of surface (excluding reverse development)

3. **Sections :**
   Section of solids (cube, prism, pyramid, cylinder, cone) cut by plane perpendicular to at–least one reference plane (excluding curved cutting planes).

4. **Orthographic Projections :**
   - Multi–view orthographic projections of simple machine parts by first angle method as recommended by Indian standards.
   - Sectional view of simple machine parts (full section and half section only).
   - Reading of orthographic projections (missing views).

5. **Isometric Projections :**
   Isometric projections/drawing of blocks (plain and cylindrical excluding spheres).

6. **Engineering Curves :**
   Parabola, Ellipse, Hyperbola, Cycloid and Involutes.

   Free Hand Sketches of Fasteners :
   Thread profile – IS conventions of external and internal threads, drilled hole, blind hole and tapped hole.
   Bolts, Nuts, Set screws, Foundation bolts and locknuts.

Practice on Auto–CAD :
- Introduction to Auto–CAD
- Fundamental of 2–D Constructions
- Orthographic Projections
- Sectional Orthographic Projections
- Reading of Orthographic Projections
- Fundamental of 3–D Drawing Isometric View

Reference :

1. Elementary Engineering Drawing (*N.D. Bhatt*) Charotar Publishing House.
2. Mastering AutoCAD (*G. Omura, Syber*) Autodesk Press – Wiley India.
3. Understanding AutoCAD (*Sham Tiekou*) Autodesk Press – Wiley India.
4. Machine Drawing (*N.D. Bhatt*) Charotar Publishing House.
5. Engineering Drawing (*M.B. Shah & B.C. Rana*).
6. Engineering Graphics with AutoCAD 2007 (*James D. Bethun*) Pearson Education (1st Edition).

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