

PAVIATH INTEGRATED SOLUTION DEMAND

CIVIL POLY

ENGINEERING GRAPHICS - I

◆ CIVIL POLY ◆ I YEAR I SEM ◆ CODE GEMI7

CIVIL ENGG

Paviath ONLINE

OBJECTIVES:

 ABILITY TO MAKE FREE-HAND SKETCHING OF OBJECTS.

 ABLE TO DIMENSION THE SHAPE DETAILS CLEARLY.

 TO CONSTRUCT CONICSECTION AND SPECIAL CURVES IN MANUAL AND CAD.

 TO UNDERSTAND THE CONCEPTS AND DRAW THE PROJECTION OF SOLIDS.

MODIFY COMMANDS- ERASE – COPY, MIRROR, OFFSET, ARRAY, MOVE, Rotate. Scale, Stretch, Lensthen, Trim, extend, Break, Chamfer, Fillet, Explode, Pedit. Object Snap Methods, Dimensions commands. Differ Disedie Journand. Scale Commands.

OTHER USEFUL COMMANDS- ZOOM, PLOT, LTYPE, BLOCK, INSERT, AND

CONSTRUCTIONS OF CONIC SECTIONS. (MANUAL DRAFTING AND COMPUTER AIDED DRAFTING)

CONIC SECTION: CONE – CONIC SECTIONS- DEFINITION OF LOCUS FOCUS, DIRECTRIX, AXIS, VERTEX AND ECCENTRICITY- DEFINITION: ELLIPSE AND PARABOLA

ELLIPSE: CONSTRUCTION OF ELLIPSE BY CONCENTRIC CIRCLE Method, rectangular method and eccentricity method with TANGENT AND NORMAL WHEN FOCUS AND DIRECTRIX ARE GIVEN

PARABILE CONSTRUCTION OF PARABOLA BY RECTANGULAR METHOD. Parabile Construction of Parabola by Rectangular Method Parallelogram Method and Eccentricity Method With Tangent and Normal When Focus and Directrix are given – exercises AND DUKRAL WHEN FOLDS AND DIREDINA ARE DIVEN - DARIDIS CONSTRUCTIONS OF SPECIAL CURVES. (MANUAL ORAFING) SPECIAL CURVES: DEFINITION - CONSTRUCTIONS OF CYCLOID -EPICYCLOID - HYPOCYCLOID - EXERCISES. INVOLUTES OF A CURCLE - ARCHIMEDEAN SPIRAL - HELX -MEMORIPME

APM Civil Engineering

STC APM

SYLLABUS COACHING

TRAINING - 2/UNIT TRAINING

SELF - 4/UNIT ASSIGNMENT

PRESENTATION - 2/UNIT

SHOWTIME - 2/UNIT

DRAWING OFFICE PRACTICE (MANUAL DRAFTING AND COMPUTER AIDED DRAFTING) Importance of Engineering Drawing - Drawing Instruments: Drawing Board, Mini Drafter, COMPASS, DIVIDER, PROTRACTOR, DRAWING SHEETS ETC., - LAYOUT OF DRAWING SHEETS IMPORTANCE OF LEGIBLE LETTERING AND NUMBERING -SINGLE STROKE LETTERS – UPPER CASE AND LOWER CASE LETTERS-GENERAL PROCEDURES FOR LETTERING AND NUMBERING - HEIGHT OF LETTERS - GUIDELINES Introduction to orthographic projection. DIMENSIONING (MANUAL DRAFTING AND COMPUTER AIDED DRAFTING)

NEED FOR DIMENSIONING - TERMS AND NOTATIONS AS PER BIS - DIMENSION LINE, EXTENSION LINE AND LEADER LINE – METHODS OF DIMENSIONING – Importance of dimensioning rules – exercises. SCALES - STUDY OF SCALES - FULL SIZE SCALE, REDUCED SCALE AND ENLARGED SCAL

PROJECTION OF POINTS. (MANUAL DRAFTING) Projection of Points - Points on the different duadrants and on the reference planes.

PROJECTION OF STRAIGHT LINES. (MANUAL DRAFTING) PROJECTION OF STRAIGHT LINE – PARALLEL TO ONE PLANE AND PROJECTION OF STRAIGHT LINE – PARALLEL TO ONE PLANE AND PERPENDICULAR TO OTHER PLANE –INCLINED TO ONE PLANE AND PARALLEL TO THE OTHER PLANE - PARALLEL TO BOTH THE PLANES INCLINED TO BOTH THE PLANES-EXERCISES

PROJECTION OF SOLIDS (MANUAL DRAFTING AND COMPUTER AIDED DRAFTING

INTRODUCTION – IMPORTANT TERMS – CLASSIFICATION OF SOLDS – POLYHEDRON – SOLDS OF REVOLUTION. PROJECTIONS OF SOLDS IN SIMPLE POSITIONS – AXIS PARALLEL TO DNE PLANE AND PARPENDICULAR TO DIFHER PLANE – AXIS INCLINED TO DNE PLANE AND PARALLEL TO DIFHER PLANE – AXIS INCLINED BOTH PLANES – EXERCISES IN PRISMS, PYRAMIDS, CYUNDER AND PDMF

N ARC – BISECT GIVEN ANGLE – DIVIDE STRAIGHT LINE INTO NUMBER OF EQUAL PARTS – DIVIDE THE CIRCLE INTO NUMBER OF EQUAL DIVISIONS - DRAW AN ARC TOUCHING TWO LINES AT ANY ANGLE – DRAW AN ARC TOUCHING TWO ARCS

CONSTRUCTION OF POLYGON. (MANUAL DRAFTING). Construct triangle, rectangle, pentagon and HEXAGON BY SIDE DISTANCE IN VARIOUS POSITIONS -CONSTRUCTION BY INSCRIBE & CIRCUMSCRIBE A CIRCLE AND BY ANGLE.

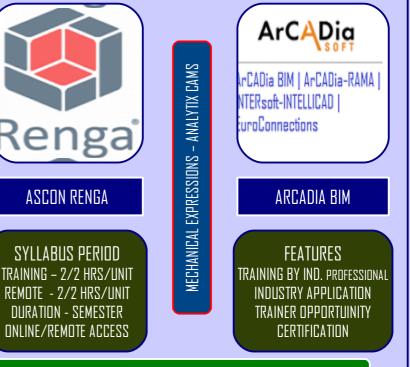
PRACTICE ON CAD

STARTING AUTO CAD-SETTING UP OF A NEW DRAWING-CREATING A NEW DRAWING- DRAWING UNITS -LIMITS -GRID AND SNAP-MENUS AND TOOL BARS-SAVE-OPEN AND EXITING DRAWING. NRAW

COMMAND:LINE,CIRCLE,ARC,POLYGON,ELLIPSE,RECTANG LE,HATCH, MTEXT, PLINE.

Text Books

1. GEM 17 Engineering Graphics-I, Murugappa Polytechnic College, 2016 Reference Books: 1. Gill P.S., "Engineering drawings", S.K.Kataria& Sons 2. Bhat N.D. "Engineering drawings", Charotar Publishing house. 3. Gopalakrishnan.K.R., "Engineering drawing", (Vol.I and vol.II), Dhanalakshmi publishers, Ed.2, 1970 4. Venugopal.K.Sreekanjana G, "Engineering Graphics" New Age International Publishers 5. K V Nataraajan "A Text Book of Engineering drawing"



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MATHS ILLUSTRATION - GEOMETRY EXPRESSIONS