INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

MECHANICAL ENGINEERING

ASSIGNMENT

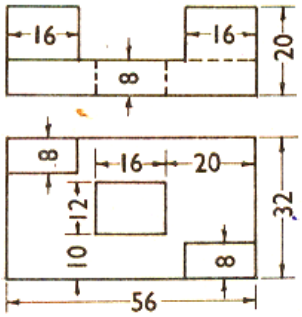
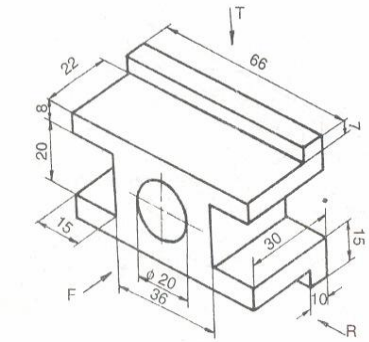
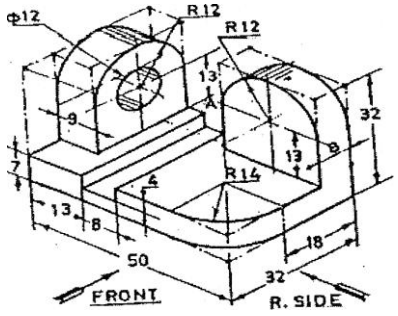
Course Name	:	**ENGINEERING DRAWING**
Course Code	:	AME001
Class	:	I Year
Branch	:	**MECH/AERO/CIVIL**
Year	:	2016 – 2017
Course Faculty	:	BVSN Rao, Professor. USP Rao, Professor, Sarat Raju, Assistant Professor, BDY Sunil, Assistant Professor.

OBJECTIVES:

The course should enable the students to

I. Understand the basic principles of engineering drawing and construction of curves used in engineering field.
II. Apply the knowledge of interpretation of projection in different quadrants.
III. Understand the projections of solids, when it is inclined to both planes simultaneously.
IV. Convert the pictorial views into orthographic view and vice versa.
V. Create intricate details of components and develop its surfaces.

S. No	QUESTION	Blooms Taxonomy Level	Course Outcome
	ASSIGNMENT-I		
1	A 4 cm long line on a map represents a 1.5 m length. Determine the RF and draw a scale long enough to measure upto 6m. Show a distance of 4.6 m on it.	Knowledge, Comprehension	1,2
2	Draw a straight line AB of any length. Make a point F, 80 mm from AB. Trace the paths of a point P moving in such a way that the ratio of its distance from the point F, to its distance from AB is (a) 3:2 (b) 1 Plot at least 10 points. Name each curve. Draw a normal and a tangent to each curve at a point on it 45mm from F.	Knowledge,	3,4
3	The front view of a line makes an angle of 30^0 with reference line. The HT of a line is 30 mm in front of the VP. While VT is 20 mm below the HP. One end of the line is 15mm above the HP and the other end of the line is 100 mm in front of the VP. Draw the projections of the line and determine its true length and true angles of inclination with the reference planes.	Comprehension	5,6,7
4	A circular plate of negligible thickness and 50 mm diameter appears as an ellipse in the front view, having its major axis 50 mm long and minor axis 30 mm long. Draw its top view when the major axis of ellipse is horizontal.	Knowledge,	5,6,7
5	A square pyramid having a base with a 40 mm side and a 75 mm long axis has a corner of its base on the V.P. A slant edge contained by that corner is inclined at 45^0 to the V.P and the plane containing the slant edge and the axis is inclined at 60^0 to the H.P. Draw its projections.	Comprehension	5,6,7

ASSIGNMENT – II			
1	A pentagonal pyramid, with base 35 side and height 70 rests on one edge of its base on HP so that the highest point on the base is 25 above HP. Draw its projection, when the axis is parallel to VP.	Knowledge,	8,9,10
2	A Hexagonal pyramid of base 50 mm and axis 100 mm long is resting on its base with two of its side parallel to VP. It is cut by a sectional plane perpendicular to VP and inclined at 45^0 to HP. Sectional plane is passing through the mid point of axis .Draw the development for the top part of the pyramid.	Comprehension	8,9,10
3	Draw an isometric view of given figure below. (All dimensions are in mm). 	Knowledge,	8,9,10
4	Draw top, front and side views of the isometric projection given in the figure. 	Comprehension	10,11
5	Draw the orthographic projections of the machine part shown in Fig *i.* Front View ii. Top View iii. Right side view. All dimensions are in mm. 	Knowledge,	11,12

Prepared by:
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