COLLEGE OF ENGINEERING , PUNE

(An autonomous institute of Govt. of Maharashtra)

End Semester Exam (SET 3)

ENGINEERING GRAPHICS II

Programme: F.Y.B.TECH (M) (Div I to IV)

Date: 22/11/2010

Time :3 hours

Instructions : **Marks 50**

1)**Question No 1 and 2 are compulsory . Solve any two questions from 3 to 6**
2)Figures to the right indicate full marks.
3)Assume suitable data whenever necessary.
4)Retain all the construction lines and external constructions.
5)Dimensioning ,line work and symbols carry due credits.

Q No 1: A regular hexagonal plate 50mm side is resting on one of its corners on HP. The diagonal through that corner is inclined at 40^0 to HP and 30^0 to VP .Draw the projections of the plate .Determine the inclinations of the plate with reference planes.

Marks 12

Q No 2: Two wire ropes are attached to the top corner of 15 m high building. The other end of one wire rope is attached to the top of a vertical pole 5 m high and the rope makes an angle of depression of 45 degrees. The other wire rope makes an angle of depression of 30 degrees and is attached to the top of a vertical pole 2 m high. The poles, in the top view are 20 m apart. Draw the projections of the wire ropes.

Marks 12

Q No 3: A hexagonal pyramid, side of base 30 mm and slant height 65 mm is lying on the V. P. on one of its triangular faces. Draw the projections of the pyramid when its axis makes an angle of 45^0 with H. P.

Marks13

Q. No 4: A pentagonal pyramid side of base 30mm and axis 50mm is kept on the H.P.on one of its triangular faces with the axis parallel to the V.P.A vertical section plane, making 45 degrees with V.P. cuts the solid intersecting the axis at a point 30 mm from the apex, thereby removing the portion containing the apex. Draw sectional elevation, plan and show the true shape of section

Marks 13

Q. No 5: A pentagonal pyramid, 50 mm side of base and 80mm height, rests on one of its corner of the base on the H.P. with axis making an angle of 30 degree to the H.P. The side of the base, opposite to the corner on the ground is parallel to the V.P. Draw the projection of the pyramid.

Marks 13

Q No 6: A square pyramid, side of base 60mm and 100mm height stands vertically on the H.P. with a pair of its triangular faces perpendicular to the V.P.It is cut by an A.I.P. (cutting plane) in such a way that the true-shape of the section is a trapezium whose parallel sides measure 60mm and 30mm.With the height of trapezium maximum possible, obtain the apparent and true-shape of the section and find the inclination of the section plane with the H.P.

Marks 13