

COLLEGE OF ENGINEERING , PUNE

(An autonomous institute of Govt. of Maharashtra)

End Semester Exam (SET 1)
ENGINEERING GRAPHICS H I

Programme: F.Y.B.TECH (Div IX, X, Backlog)

Date: 22/11/2010

Time :3 hours

Marks 50

Instructions :

- 1) Question No 1 and 2 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: ABCD is a symmetrical trapezium with AB = 50mm and CD =80mm as its parallel sides and 60mm height. The plane has its side AB in VP and CD 35mm away from it. The elevation of BC makes angle of 35 with XY line. Obtain the projection of the plane and find its angles with the reference planes.

Marks 12

Q No 2: A picture frame 2 m wide and 1 m high is to be fixed on a wall railing by two straight wires attached to the top corners. The frame is to make an angle of 40 degrees with the wall and the wires are to be fixed to a hook on the wall on the centre line of the frame and 1.5 m above the railing. Find the length of the wires and the angle between them.

Marks 12

Q No 3: A pentagonal pyramid side of base 30 mm and axis length 65 mm is kept on H. P. on one of its base corners in such a way that the triangular face opposite to that corner is making an angle of 45° to H. P.. Draw the projections of the pyramid when one of the slant edges contained by that triangular face makes an angle of 30° to V. P.

Marks 13

Q. No 4: A square pyramid of side of base 70mm and length 100mm is placed with one of its triangular faces on H.P.with axis parallel to the V.P.It is cut by an A.V.P.passing through the axis 25mm from the base of the solid and inclined at 30 degree to the V.P.and remove the apex .Draw the sectional elevation, plan and show true shape of the section

Marks 13

Q. No 5: A pentagonal pyramid of base edge 40mm and height 80mm is resting on the H.P. on its apex, such that the axis makes 30 degrees to H.P.and 60 degrees to V.P.draw the projections of pyramid

Marks 13

Q No 6: ABCD is a tetrahedron of 70mm long edges. The face ABC is on the H.P. with the edge AB perpendicular to V.P. The solid is cut by an A.I.P (cutting plane) in such a way, that the true-shape of the section is a trapezoid of parallel sides 40mm and 18mm.Draw the projections of the solid, sectional plan and true-shape of the section. Find the inclination of the cutting plane with the H.P.

Marks 13