

# COLLEGE OF ENGINEERING, PUNE

(An autonomous institute of Govt. of Maharashtra)

End Semester Exam (DEC 2009)

ENGINEERING GRAPHICS I (ME101)

Programme: F.Y.B.TECH

(Evening)

Time: 3 hours

Marks 50

Instructions:

- 1) All questions are compulsory.
- 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:** The distance between the end projectors is 50. The F.V. makes an angle of 45 degrees to H.P. Its H.T. is 12 mm below H.P. and point A is 10mm above H.P. Line is making an angle of 30 degrees with the H.P. Draw the projections. Determine the true length of AB, its inclination with the V.P and its vertical tress.

Marks 12

**Q No 2:** A thin 30 degrees -60 degrees set square has its longest edge in the V.P. and inclined at 30 degrees to the H.P. Its surface makes an angle of 45 degrees with the V.P. Draw its projections.

Marks 12

**Q No 3 :** A hexagonal pyramid side of base 40 mm and length of axis 80mm is tilted towards the observer on one of its base edges in such a way that the triangular face containing the edge on which the pyramid rests, appears in elevation (FV) as an isosceles triangle of 40mm base and 60 mm altitude.

Draw the projections and find the inclination of the base of the pyramid with H.P.

Marks 13

Or

**Q No 3:** Draw the projections of a cone of base 70 mm diameter and length of axis 100 mm long having one of its generators parallel to the V.P. and inclined at 30 degrees to the H.P. The apex being towards the observer.

Marks 13

**Q No 4:** A square pyramid, side of base 60mm and 100 mm height stands on its base on H.P., so that two base edges are perpendicular to V.P.

It is cut by a cutting plane which is perpendicular to V.P., in such a way that the true shape of section is a trapezium whose parallel sides measure 50 mm and 30 mm. Draw the front view, sectional top view and find the inclination of the section plane with the H.P.

Marks 13