



Reg. No. :

Name :

**Combined First and Second Semester B.Tech. Degree Examination, May 2009
(2008 Scheme)**

08-104 : ENGINEERING GRAPHICS (MNHTAB)

Time : 3 Hours

Max. Marks : 100

Instructions : i) Answer any two questions from each Module.

ii) Drawing must be neat and dimensioned.

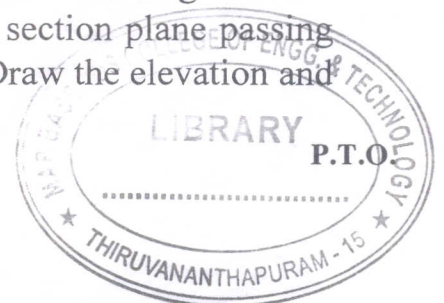
iii) First angle projection to be followed.

MODULE – I

1. The vertex of a hyperbola is 30 mm from its directrix and the eccentricity is $\frac{4}{3}$. Draw the hyperbola and draw the tangent and normal at any point on the curve.
2. Construct a logarithmic spiral for one convolution. The length of the shortest radius vector is 11 mm and the ratio of the lengths of the successive radius vectors is $\frac{6}{5}$ for a vectorial angle of 30° . Draw the tangent and normal at any point on the curve.
3. A line AB inclined at 30° to VP has its end A 15 mm and end B 50 mm below HP. The length of its elevation is 60 mm and its Vertical Trace (VT) is 7 mm below HP. Draw the projections and determine the true length of the line, inclination with the HP. Also locate its Horizontal Trace (HT). (2×16=32 Marks)

MODULE – II

4. A pentagonal prism, edge of base 30 mm and height 55 mm is resting on a corner of its base on HP and 45 mm in front of VP. The longer edge containing that corner is inclined at 45° to HP and the plane containing that edge and the axis is inclined at 30° to VP. Draw the projections of the prism.
5. A cone, diameter of base 60 mm and height 75 mm is resting on one of its generators on HP with axis parallel to VP. It is cut by a horizontal section plane passing through a point on the axis 50 mm away from the apex. Draw the elevation and sectional plan.





6. A hexagonal pyramid side of base 30 mm and length of axis 70 mm is kept on the ground on its base. It is cut by an AIP inclined at 45° to the base and cutting the axis at 47 mm from the apex. Draw the development of the lateral surface of the pyramid. **(2×17=34 Marks)**

MODULE – III

7. A right circular cone of base diameter 30 mm and height 36 mm rests centrally on top of a square block of 48 mm side and 22 mm thick. Draw the isometric projection of the solids.
8. A square prism edge of base 30 mm and height 60 mm, resting on its base on HP, is completely penetrated by another square prism of 20 mm base edge such that the axis of the penetrating prism is perpendicular to and 5 mm in front of the axis of the vertical prism. The rectangular faces of the two prisms are equally inclined to the VP. Draw the projections of the solids showing the line of intersection. Assume suitable length for the penetrating prism.
9. A pentagonal pyramid of height 45 mm and base edge 30 mm is resting on its base with one base edge parallel, 10 mm behind and nearer to the picture plane. The station point is 22 mm in front of the picture plane, 40 mm to the left of the axis and 50 mm above the ground plane. Draw the perspective projection of the pyramid. **(2×17=34 Marks)**

