[Time : 2 Hours]   [Max. Marks : 50]
Total No. of Questions : 08   [Total No. of Printed Pages :2]
Instructions :
   (1) Use only half imperial size drawing sheet as answer book.
   (2) Retain all construction lines.
   (3) Assume suitable data if necessary.

Q1)   The point A of line AB is 15 mm above HP and is in VP. The   12
        front view and top view of line AB makes 40^0 and 35^0 with
        XY respectively. Draw the projections, if the projector distance
        between the end points of the line is 60 mm. Find the true length
        of line and true inclinations made by the line. Locate the traces.

OR

Q2)   The point P of line PQ is in HP and 15 mm in front of VP. The   12
        top view of line PQ makes 40^0 with XY, while its plan measure
        100 mm. Draw the projections if the true length of line is 112 mm.
        Find the true inclinations made by the line and locate the traces.

Q3)   A circular lamina of diameter 60mm is resting in HP on one of its   13
        circumferential point. Then, its surface is inclined to HP at an angle
        of 45^0. Draw the projections of lamina, if the top view of a diameter
        line passing through the resting point makes 35^0 with VP. Find the
        true inclination made by the lamina with VP.

OR

Q4)   A triangle ABC [AB = 40mm, BC = 60 mm, and angle ABC = 90^0]   13
        is resting in VP on its side AB. Then its surface is inclined to VP in

such a way that the point C is 39 mm in front of VP. Draw the projections if the resting side is inclined at an angle of 20^0 with HP. Find the inclination made by the plane with HP.

Q5) A cylinder of base diameter 60mm and axis height 80mm is resting in HP. Then, it is inclined to HP so that the generator passing through resting point is inclined to HP at an angle of 45^0. Draw the projections, if the plane containing the axis makes 35^0 with VP.   13

OR

Q6) A triangular prism, base side 50 mm and axis height 75 mm, is resting in HP on one of its base side. Then, it is inclined to HP in such a way that the base surface is inclined at an angle of 50^0 with HP. Draw the projections of solid, if the resting side is inclined at an angle of 45^0 with VP.   13

Q7)A) Draw a parabola by focus-directrix method, if the distance of focus from the directrix is 80 mm.   06

B) Draw a helix of one revolution to a cylinder of base diameter 60mm and axis height 100mm.   06

OR

Q8)A) Draw an ellipse by rectangular method, if the major and minor axes are 100 mm and 60 mm respectively.   06

B) Draw an involute of a circle with diameter 60mm.   06