

EX/PE/T/115 (OLD)

B. POWER ENGINEERING, FIRST YEAR, FIRST SEMESTER EXAMINATION, 2019

SUBJECT: ENGINEERING DRAWING - I

Time : Three hours

Full Marks : 100

Answer any five questions.

1. Draw an involute of a circle of 42 mm diameter. Also, draw a normal and a tangent at any point on the curve.
2. A distance of 1 cm on a machine part has to be represented by a line 3 cm on the drawing. Draw a diagonal scale showing divisions of 0.01 cm and capable of measuring up to 5 cm. Mark a distance of 3.74 cm on the scale.
3. A line **AB**, 50 mm long, is inclined at 30° with HP and 45° with VP. The end **A** is 10 mm above HP and 20 mm in front of VP. Draw the projections. Measure the apparent angles and show on the drawing.
4. A square lamina ABCD, of 30 mm side, rests on H.P. on its corner C. Its plane is inclined at 45° to the HP such that its diagonal DB is parallel to the HP and inclined at 30° to the VP. Draw its projections when its corner D is towards the VP and 15 mm in front of it.
5. A right regular pentagonal pyramid, side of base 30 mm and height 60 mm, rests on HP on one of its triangular faces such that its axis is parallel to the V.P. Draw the projections when the axis is 35 mm away from the V.P.
6. A cylinder of 40 mm diameter and height 70 mm rests on HP with its axis perpendicular to the HP. Draw the orthographic projections and the Isometric view of the cylinder. Show all the necessary construction lines on the drawing.
7. The figure shows below a pictorial view of a machine part.
Draw (a) Front view, (b) Top view

