

Engineering Drawing

Date: 25 / 2 / 2017

Mid Sem Test 1

Max. Marks - 30

Q.1 Answer any five

[10]

- a) A square lamina of sides 40mm is resting on HP on one of its sides and the lamina makes an angle 45° to HP and perpendicular to VP. Draw its projections
- b) Define a cycloid
- c) Define an Involute
- d) A point P is 40mm below HP and 20mm behind VP, Draw its projections
- e) Explain Plan length and Elevation length with sketches
- f) Draw the projections of a line AB, 70mm inclined at 30° to VP and parallel to HP, if end A is 20mm from both reference planes and line is in second quadrant

Q.2 Draw an Helix of a cylinder of diameter 60mm and axis 80 mm, for one pitch of 60mm [6]

OR

Draw the locus of a point on the rim of a wheel, opposite to contact point when it rolls on a horizontal ground for one complete revolution without slipping. Also draw Normal and tangent at any point on the curve. Name the curve

Q.3 Draw the projections of an 80 mm long line AB inclined at 30° to HP and 60° to VP. Midpoint is on the HP and 15mm in front of VP and end B is in third quadrant [6]

OR $DBEP = 80mm$

The distance between end projectors of a line AB is 80mm. A point C on AB divides the line in the ratio 3: 5 and is in HP and 10mm behind VP. Draw the projections if point P is 25mm above HP and 45mm behind VP. Also find the true length and true inclinations.

Q.4 A square pyramid, base 60mm side and axis 60mm long has one of its triangular faces vertical and inclined at 60° to VP. Draw the projections of the solid [8]

OR

An Hexagonal pyramid, base 35mm side and axis 70mm long is resting on one of its sides of base on HP with its axis inclined at 30° to HP and its top view of the axis inclined at 60° to VP. Draw the projections.

