I B. Tech II Semester Supplementary Examinations, Nov/Dec - 2017 ENGINEERING DRAWING
(Com. to CE \& ME)
Time: 3 hours
Max. Marks: 70
Note: 1. Question Paper consists of two parts (Part-A and Part-B)
2. Answering the question in Part-A is Compulsory
3. Answer any THREE Questions from Part-B

## PART-A

1. a) Draw the process of Trisecting a right angle.
b) Represent third angle projections.
c) Draw the projections of the Point C lies 30 mm from the HP and 20 mm from the VP.
d) Draw the projections of a 65 mm long straight line, in the following position : Parallel to both the HP and the VP and 25 mm from each.
e) Draw the projections of a cylinder of diameter 30 mm and 50 mm long resting on HP on its generator parallel to both the HP and VP and 40 mm in front of the VP.
f) Draw the Orthographic projections of pentagon lies in the VP and a side parallel and 20 mm above the HP. Take side of the pentagon 40 mm .

## PART-B

2. A fixed point F is 7.5 cm from a fixed straight line. Draw the locus of a point P moving in such a way that its distance from the fixed straight line is $2 / 3$ times its distance from F. Plot at least 9 points. Name the curves. Also draw a normal and a tangent to the curve at a point on it 6 cm from F .
3. a) Draw the projections of the following points in all 4-quadrant when the
i. Point A in the HP and 20 mm in front of the VP.
ii. Point B lies in the V.P. and 30 mm above the HP.
iii. Point C 30 mm below the HP and 20 mm behind the VP.
iv. Point D 40 mm in front of the VP and 25 mm below the HP.
b) A line PQ 75 mm long has its end P in the VP and the end Q in the HP. The line is inclined at $30^{\circ}$ to the HP and $60^{\circ}$ to the VP. Draw its projections.
4. a) Draw the projections of a circle of 5 cm diameter, having its plane vertical and inclined at $30^{\circ}$ to the VP Its centre is 3 cm above the HP and 2 cm in front of the VP.
b) The front view of a line, inclined at $45^{\circ}$ to the VP is 65 mm long. Draw the projections of the line, when it is parallel to and 40 mm above the HP. It's one end being 30 mm in front of the VP.

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5. a) A hexagonal plate of 30 mm side is perpendicular to VP and parallel to HP. One of its edges is perpendicular to VP. Draw its projections.
b) A regular pentagon of 25 mm side has one side on the ground. Its plane is inclined at $45^{0}$ to the HP and perpendicular to the VP. Draw its projections.
6. a) A cube of 40 mm side rests with one of its square faces on the HP such that one of its vertical faces is perpendicular to VP. Draw its projections. The nearest edge parallel to VP is 10 mm in front of it.
b) Draw the projections of a hexagonal pyramid, base 30 mm side and axis 60 mm long, having its base on the HP and one of the edges of the base inclined at $45^{\circ}$ to the VP.
7. a) Draw the elevation, plan and left and right views of the bracket shown in the ( 16 M ) figure-1.


Figure-1

## Note: All dimensions are in mm.

