Code No: R161210 **R16** SET - 1

I B. Tech II Semester Supplementary Examinations, Nov/Dec - 2017
ENGINEERING DRAWING
(Com. to ME, CHEM, AE, AME, Min E, PE, PCE, MET)

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 **FOUR** Questions from **Part-B**

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PART –A

1. a) Construct a Hexagon inscribed in a circle of 60 mm diameter. (4M)

   b) Draw the projections of the following points on a common reference line: (4M)
   (i) P, 25mm below the HP and in the VP.
   (ii) Q, 40mm behind the VP and in the HP.

   c) A square pyramid of base side 35 mm and axis 65 mm long is resting on the HP. Draw its projections when (i) a side of the base is parallel to the VP (b) a side of the base inclined at 30^0 to the VP. (6M)

PART –B

2. a) Draw a straight line AB of any length Mark a point F, 60mm from AB. Trace the path of a point P moving in such a way, that the ratio of its distance from the point F, to its distance from AB is 3:2 .Plot at least 10 points. Name each curve. Draw a normal and tangent to the curve at a point on it and 45mm from F. (7M)

   b) A circle of 50mm diameter rolls along the floor for one revolution without slipping. Draw the curve traced out by a point on the circumference of the circle. Also draw a normal and tangent at any point on the curve. (7M)

3. a) Draw a diagonal scale of RF= 1 / 2.5 and long enough to measure 30 cm. Show a distance of 22.5 cm on it. (8M)

   b) The front view of an 80 mm long line AB measures 50 mm. The line lies in the HP. Such that one end is 30 mm in front of the VP. Draw the projections of the line and find its inclination with the VP. (6M)

4. a) A straight line GH has its end G is 15 mm above HP and 20 mm in front of VP. Its elevation has a length of 45 mm. The line is inclined at 50º to VP and parallel to HP. Draw its projections and find the true length of the line. (8M)

   b) Draw the projections of a 60 mm long line PQ, which is situated on the HP and the VP. Also, determine the traces of the line. (6M)
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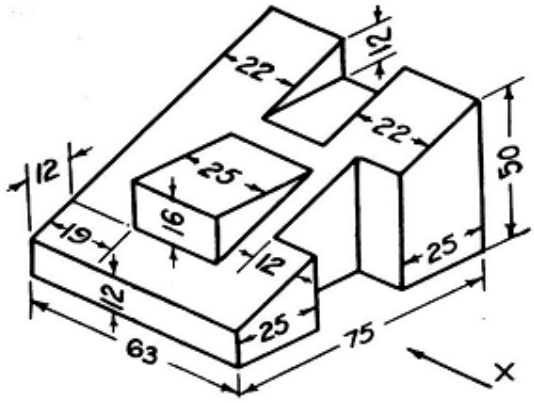
5. A thin hexagonal piece of metal sheet with a 40mm side has a hole with a 40mm diameter punched centrally. It is placed on a corner in the HP. Its surface is inclined at 30^o to the HP and the top view of the diagonal through the corner in the HP makes an angle 45^o with the VP. Draw its projections. (14M)

6. a) Draw the projections of a cylinder 75mm diameter and 100 mm long, lying on the ground with its axis inclined at 30^0 to the VP and parallel to the ground. (8M)

   b) A tetrahedron of edge 65 mm is resting on a face on the HP. Such that an edge is parallel to and 25 mm in front of the VP. Draw its projections. (6M)

7. Draw (i) front view (ii) side view from the left (iii) top view of a given figure shown below. All dimensions are in mm. (14M)



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