Code No: R201104 **R20** SET - 1

I B. Tech I Semester Regular Examinations, July/August-2021

ENGINEERING DRAWING

(Com. to CE, ME, ECE, PE, EIE, FE)

Time: 3 hours Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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1. a) A wheel of 50 mm diameter rolls without slipping on a straight flat surface. Trace the locus of the point of contact for one complete revolution of the wheel. (10M)

   b) Construct a regular pentagon of side 50mm by general method. (4M)

Or

2. a) Construct a regular hexagon of side 50mm by general method. (10M)

   b) Draw a hyperbola by rectangle method given base 60 and axis 40 also draw a tangent 20 from base. (4M)

3. a) A line PQ 65 mm long has its end P, 15 mm above the HP and 15 mm in front of the VP. It is inclined at 55^0 to the HP and 35^0 to the VP. Draw its projections, and find its true length. (9M)

   b) A point at 25mm above the reference line x y is the front view of two points A and B. The top view of A is 40mm behind V.P. and the top view of B is 50mm in front of V.P. Draw the projections of the points. (5M)

Or

4. a) A point A is 20mm above H.P. and in the first quadrant. Its shortest distance from the reference line XY is 40mm. Draw the projections of the point and determine its distance from V.P. (5M)

   b) A line PQ has its end P, 10 mm above the HP and 20 mm in front of the VP. The end Q is 85 mm in front of the VP. The front view of the line measures 75 mm. The distance between the end projectors is 50 mm. Draw the projections of the line and find its true length. (9M)

5. a) Draw the projections of a circle of 50 mm diameter when its plane is equally inclined to HP and VP. One end of a diameter of the circle touches the HP while the other end touches the VP. (10M)

   b) Draw the projections of an equilateral triangle of side 40mm, one edge in the H.P and its surface in the V.P (4M)

Or

6. a) A hexagonal plane of side 25mm resting on H.P with one of its edge parallel to V.P and in the V.P. Draw its projections. (4M)

   b) A regular hexagon of side 20 mm has one of its sides inclined at 30^0 to VP. Its surface makes an angle of 60^0 with the ground. Draw its projections. (10M)
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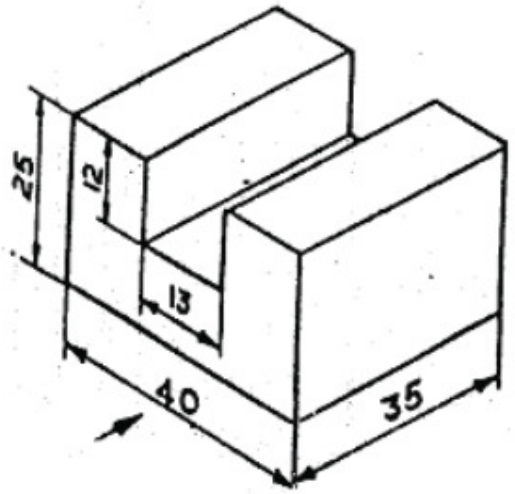
7 A hexagonal prism, base 30mm side and axis 75mm long, has an edge of the base parallel to the H.P. and inclined at 45^0 to the V.P. Its axis makes an angle of 60^0 with the H.P. Draw its projections. (14M)

Or

8. a) Draw the projection of a pentagonal pyramid, whose base edge is 30 mm and axis is 40 mm long. The pyramid is resting on a horizontal plane with one of its base edges inclined at an angle of 30º with VP. (9M)

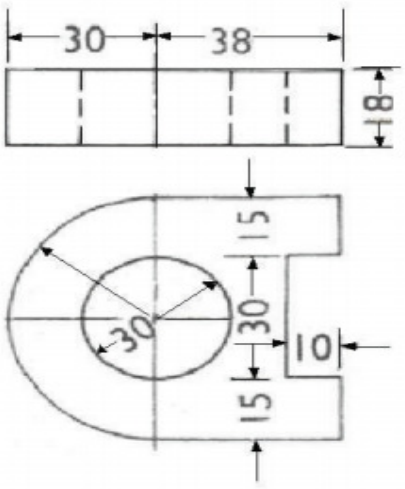
b) Draw the projections of a square prism, side of base 35mm and axis 55mm long, resting on face in H.P with its axis perpendicular to V.P (5M)

9. Draw the three orthographic views of the object shown in figure. All dimensions are in mm. (14M)



Or

10 Draw the isometric projection of the object from the views shown in figure below. All dimensions are in mm. (14M)



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