Code No: R201224 **R20** SET - 1

**I B. Tech II Semester Regular Examinations, September- 2021**

# ENGINEERING DRAWING

**(Comm. to Mining, Agri. E, Phar. E)**

Time: 3 hours Max. Marks: 70

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

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## UNIT-I

1. a) The Directrix of a hyperbola is 65mm from its focus. Draw the curve if the eccentricity is 3/2. Draw a normal and a tangent at a point on the curve, 75 mm from the Focus. (7M)
   b) Construct a scale of 1:8 to show decimeters and centimeters and to read up to 1 m. Show a length of 7.6 dm on it. (7M)

Or

2. a) Draw epicycloids if a circle of 40 mm diameter rolls outside another circle of 120 mm diameter for one revolution. (7M)
   b) Inscribe an ellipse in a parallelogram of sides 150 × 100 mm with an inclined angle of $120^0$. (7M)

## UNIT-II

3. a) Draw the projections of the following points, keeping the distance between the projectors as 25 mm on the same reference line: (5M)
   (i) Point 'A' on HP and 20 mm behind VP.
   (ii) Point 'B' 20 mm below HP and 30 mm behind VP.
   b) Draw the projections of a 60 mm long straight line, in the following positions. (9M)
   (i) Perpendicular to the HP, in the VP and its one end in the HP.
   (ii) Inclined at $45^0$ to the VP, in the HP and its one end in the VP.

Or

4. A line AB, 80 mm long, makes an angle of $30^0$ with the VP, and lies in a plane perpendicular to both the HP and VP. Its end A is in the HP, and the end B is in the VP. Draw its projections and show its traces. (14M)

## UNIT-III

5. A semi-circular plane of diameter 70 mm has its straight edge on the HP and inclined at $45^0$ to the VP. Draw the projection of the plane when its surface is inclined at $30^0$ to the HP. (14M)

Or

6. PQRS is a rhombus having diagonal PR = 60 mm and QS = 40 mm and they are perpendicular to each other. The plane of the rhombus is inclined with H.P. Such that its top view appears to be square. The top view of PR makes $30^0$ with the V.P. Draw its projections and determine inclination of the plane with the H.P. (14M)

## UNIT-IV

7. Draw the projections of a pentagonal prism of base side 25 mm and axis length 50 mm rests on the HP on one of its rectangular faces. The axis is inclined at $45^0$ to the VP. (14M)

Or

8. A cone with 50 mm diameter and axis 65 mm has one of its generators in the VP and inclined at $45^0$ to the HP. Draw the projections of the cone. (14M)
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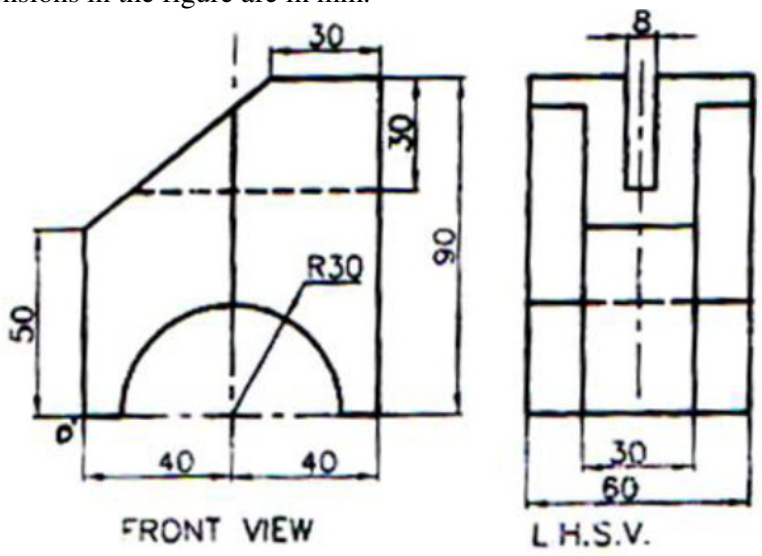
**UNIT-V**

9. Figure shows two views of an object. Draw the isometric view of the object. All dimensions in the figure are in mm. (14M)




Or

10. Draw the three views of the part shown in the figure below. All dimensions are in mm. (14M)