

I B. Tech I Semester Supplementary Examinations, July/August- 2021
ENGINEERING DRAWING

(Com. to CE, EEE, ME, ECE, CSE, Chem. E, EIE, IT, Pet E, Agri E)

Time: 3 hours

Max. Marks: 75

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

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1. a) Draw the in volute of a regular hexagon of side 20 mm. (10M)  
 b) A ball is thrown in the sky achieves maximum height of 5m and reaches the ground back at a distance of 11meters from the place it was thrown. Draw the locus of the ball and name the curve. (5M)

**Or**

2. a) Construct a scale of 1:50 to read metres and decimeters and long enough to measure up to 6 m. Mark on it a distance of 5.5 m. (8M)  
 b) The major and minor axes of an ellipse are 120 mm and 80 mm. Draw an ellipse by oblong method. (7M)
3. a) A line AB 50 mm long is perpendicular to VP and parallel to HP. Its end A is 20 mm in front of VP and the line is 40 mm above HP. Draw the projections of the line. (7M)  
 b) Draw all the three views of a point P lying 60 mm below HP, 70 mm in front of VP and 40 mm from the Right Profile Plane. Also state the quadrant in which it lies. (8M)

**Or**

4. A line PQ 80 mm long is inclined at  $30^{\circ}$  to VP and  $45^{\circ}$  to HP. The point P is 10 mm above HP and 20 mm in front of VP. Draw the projection of the line and find the apparent angle of the line with both HP and VP. Also locate the traces. (15M)
5. A regular pentagon of 30 mm sides is resting on HP on one of its sides while its opposite vertex (corner) is 30 mm above HP. Draw projections when side in HP is  $30^{\circ}$  inclined to VP. (15M)

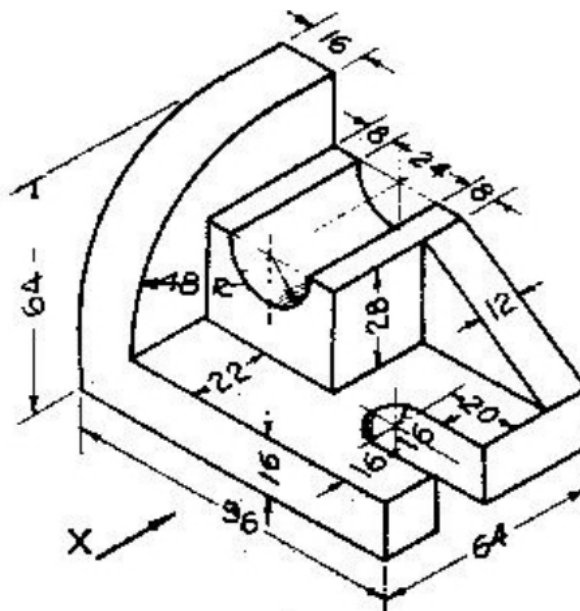
**Or**

6. A  $30^{\circ}$ - $60^{\circ}$  set square of 60 mm longest side is so kept such that the longest side is in HP, making an angle of  $30^{\circ}$  with VP. The set square itself is inclined at  $45^{\circ}$  to HP. Draw the projections of the set square. (15M)
7. a) A triangular prism, 40 mm side of base and 60 mm length of axis, has its axis perpendicular to the VP. Draw the projections if one of its rectangular faces is inclined at  $45^{\circ}$  to the HP. (10M)  
 b) A hexagonal pyramid with side of base 30 mm and axis 60 mm long is resting with its base on HP. such that one of the base edges is inclined to VP at  $45^{\circ}$  and the axis is 50 mm in front of VP. (5M)

**Or**



8. a) A square prism of base side 40 mm and length of axis 70 mm is resting the HP on one of its longer edges with axis parallel to both the reference planes. One of the rectangular faces is inclined at  $30^\circ$  to the HP. Draw its three views. (10M)
- b) A pentagonal pyramid of base 30 mm side and axis 50 mm long has its apex in VP and the axis perpendicular to VP. A corner of the base is resting on the ground and the side of the base contained by the corner is inclined at  $30^\circ$  to the ground. Draw its projections. (5M)
9. A pictorial view of an object is given in figure draw following view according to FIRST angle projection method. Take appropriate scale. (15M)
- (a) Front view looking from direction "X" (b) Top view



Figure

Or

10. Draw the isometric projection of the block shown in Figure. (15M)

