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**Sr. No. of Question Paper** :

Your Roll No.....

Unique Paper Code : 32223906

Name of the Paper : Technical Drawing

Name of the Course : **B.Sc. Hons.+ B.Sc. Prog.–CBCS– Skill Enhancement Course**

Name of the Department : Physics

Semester : IV

Question Paper Set Number : 1

Duration : 3 Hours

Maximum Marks : 50

**Instructions for Candidates**

1. Attempt any **Four** questions.
2. **All** questions carry equal marks.
3. Use A3/A4 sheets for the drawings.

Q1. On a map, the distance of 10 km is shown by a 20 cm long line. Find the RF. Construct the vernier scale of this RF to read decameters and measure up to 5 Km. Show the distances 0.35 km and 3.57 km on the scale.

Q2. An artificial satellite is orbiting around earth. The major axis of its orbit is 40,000 km and minor axis is 30,000 km. Draw the orbit of the satellite and show the position of the earth centre, assuming that it is on one of the foci. Also draw the tangent and the normal to the orbit at a point 12,000 km away from the earth centre.

Q3. A square prism of base sides 30 mm and axis length 60 mm is kept on HP on its base such that one of the base edges makes an angle of 30 degrees with the VP. The prism is cut by a plane inclined at  $45^\circ$  to the HP, perpendicular to the VP and passing through the mid-point of the axis of the prism. Draw the front and top views of the sectioned prism.

Q4. A tetrahedron of sides 50 mm is placed such that one of the triangular faces is parallel to and 10 mm above HP. One side of this triangular face is perpendicular to VP, and its end closer to VP is 15 mm from it. Draw the top and front projection views.

Q5. Draw the isometric projection of a rectangular hollow prism with outer base dimensions 60 mm  $\times$  40 mm, height 80 mm and thickness 10 mm. The prism axis is vertical and the shorter edge of the base is perpendicular to VP.

Q6. What is a block in AutoCad? How many types of blocks are there in AutoCad? How is it created and inserted in an AutoCad workspace?