

[This question paper contains 2 printed pages]

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 : III

Question Paper Set Number : 2

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 drawings.

Q1. The distance between Delhi and Agra is 200 km and its equivalent distance on map measures 10 cm. Draw a diagonal scale to read 1 km minimum. Indicate the distances 223 km and 135 km on the scale. (12.5)

Q2. What is an Archimedean spiral? Draw an Archimedean spiral of $1\frac{1}{2}$ convolutions with the greatest radius of 120 mm and the smallest radius of 30 mm. Also draw the tangent and normal to the curve at a point 60 mm from the pole. (12.5)

Q3. An isosceles triangle, two sides 60 mm, the other side 40mm, is perpendicular to VP, and at an angle with the HP such that it appears as an equilateral triangle in the top view. One side of the triangle is perpendicular to VP in the top view. How long is its projection in the front view? What angle does the plane of the triangle make with the HP? Answer these questions with the help of front and top view projections. (12.5)

Q4. A regular triangular prism with base sides 50 mm and axis length 70 mm, is resting one of its rectangular faces on HP. The prism axis makes 60 degree angle with the VP. Draw front and top view projections. (12.5)

Q5. A right regular hexagonal prism of side base 25 mm and height 60 mm has a square hole of 20 mm side at the center. The hole axis coincides with the prism axis, and one of the lateral faces of the hole is parallel to one of the rectangular faces of the hexagon. The hexagonal prism is placed with its base on HP and one side of the base parallel to VP. Draw the isometric projection of the prism with the hole. (12.5)

Q6. In AUTO-CAD, How do you draw a line with Cartesian and polar coordinates in absolute and relative modes? Explain with the help of an example. (12.5)