

[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. Physics + B.Sc. Prog. (CBCS) – Skill Enhancement Course**

Name of the Department : Physics

Semester : III

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 drawings.

Q1. The distance between Nagpur and Chandrapur is 156 km. The cities are shown 78 mm apart on a road map. Draw a diagonal scale with this representative fraction and long enough to measure up to 300 kilometers. Indicate a distance of 219 km on the scale. (12.5)

Q2. A rocket shot up in the air, reaches a maximum height of 800 m and falls on the ground at a distance of 1800 m from the point of projection. Trace the path of the rocket in space. What is the angle of the projectile? (12.5)

Q3. A cone of base diameter 50 mm and height 70 mm rests with its base on HP. A section plane perpendicular to VP and inclined at  $30^\circ$  to HP bisects the axis of the cone. Draw the sectional top and front views. (12.5)

Q4. A hexagonal pyramid, with a base side of 25 mm and an axis length of 50 mm, rests with one of the edges of its base on HP and its axis is inclined at  $30^\circ$  to HP and parallel to VP. Draw its front and top projections. (12.5)

Q5. Draw the isometric projection of a square hollow prism with outer base side length 50 mm, height 80 mm and thickness 10 mm when its axis is vertical and two parallel edges of the base are perpendicular to VP. (12.5)

Q6. Explain the function of following AUTO-CAD commands (any five):

- (a) Fillet
- (b) OSNAP
- (c) Measure
- (d) LOFT
- (e) Mirror
- (f) DDPTYPE
- (g) Extend

(2.5×5=12.5)