

**Question Paper 2007 Delhi set 2**  
**CBSE Class 12 ENGINEERING DRAWING**

**General Instruction:**

- Attempt all the questions.
- Use both sides of the drawing sheet, if necessary.
- All dimensions are in millimeters.
- Missing and mismatching dimensions, if any, may be suitably assumed.
- Follow the SP : 46-1988 codes.
- (with First Angle method of projection)

1. (a) Construct an isometric scale. [4]

(b) Construct an isometric projection of a frustum of a pentagonal-pyramid, base-side = 40 mm, top-side = 30 mm and height of axis = 60 mm. When resting on H.P. with its base on it, one of the base-sides is perpendicular to V.P. and the axis is perpendicular to H.P. Give all dimensions. [10]

(c) A hexagonal prism with base side = 30 mm and height = 40 mm, is resting on H.P. on its hexagonal base. One of its base sides is parallel to V.P. On the top hexagonal end, a sphere of 25 mm radius is centrally placed. Taking their common axis perpendicular to H.P., draw the isometric projection of the two solids. Give all dimensions. [1]

2. (a) Draw to scale 1 : 1, the plan and front view of a square nut, taking nominal diameter = 25 mm, keeping its axis perpendicular to H.P. and two opposite sides of the square parallel to V.P. Give standard dimensions. [9]

**OR**

Draw to scale 1 : 1, the standard profiles of a square-thread and a knuckle-thread, taking pitch = 40 mm for each. Give standard dimensions.

(b) Sketch free-hand the front view and top view of a stud with a square-neck, keeping the axis perpendicular to H.P. Take nominal diameter = 20 mm. Give standard dimensions. [6]

3. Figure 1 shows the parts of a foot-step bearing. Assemble these parts correctly and then

draw the front view, left half in section to a scale full-size. [25]  
Print title and scale used. Give 6 important dimensions.

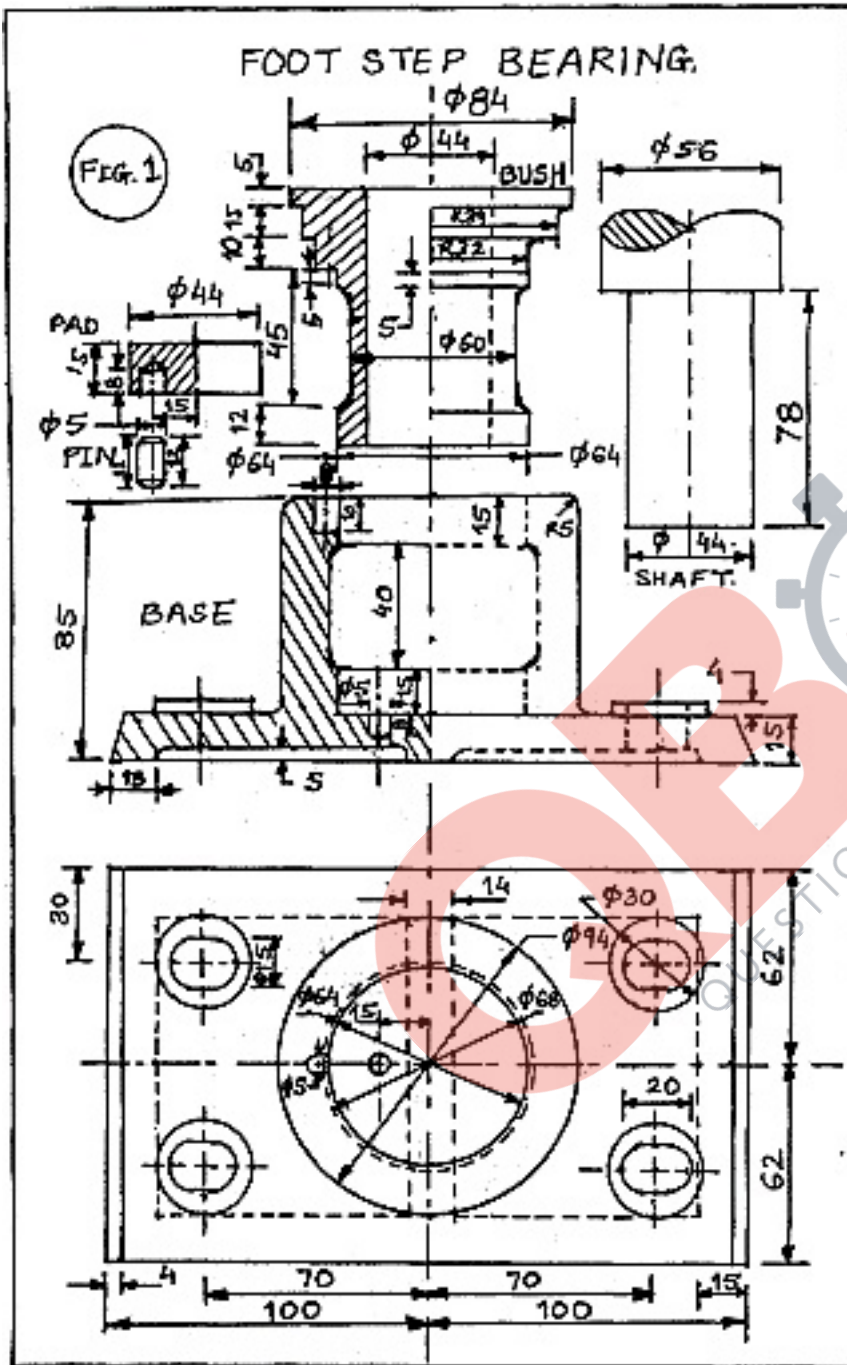


Figure 2 shows the parts of a gib and cotter joint for square rods. Assemble these parts correctly and then draw the following views to a scale full-size:

(a) Front view, upper half in section [18]

(b) Plan [7]

Print title and the scale used. Draw the projection symbol. Give 6 important dimensions. [5]

