SRM

1. Exercise : 5

2. Date: 15/11/2020

3. Title : Projection of solids.

4. Aim : To draw the orthographic multi-view projection of solid prisms/ cylinders. pyramids/ cones.

5. Software used: AutoCAD - 2020

6. Introduction: Prisms and Cylinders:

★ A Prism is a solid object with identical ends, flat faces and the same cross section all along its edge lengths

★ A cylinder is a closed solid that has two parallel bases connected by a curved surface.

6.1 Terminology (pyramid with sketch):

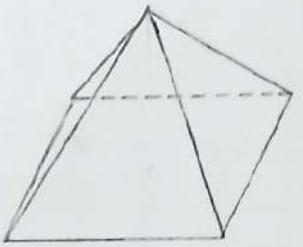

Fig.

6.2 Real time example - Picture

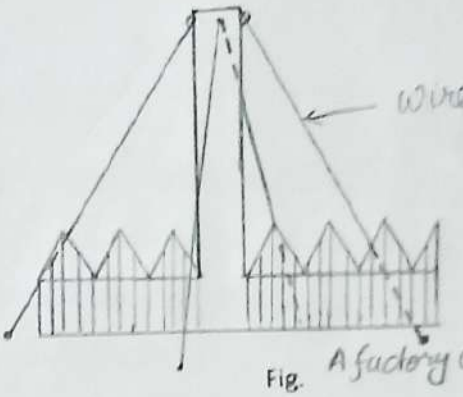

Fig. A factory chimney

7. Procedure (for solving question #):

7.1 Question outline : Draw projection of a square prism

7.2 Object : Square prism

7.3 Resting on Conditions : Base on Horizontal Plane.

7.4 Other resting condition (if any) : Longer edge of square prism is parallel to wall

7.5 Other condition (if any) : Base side 35 mm ; axis length 60 mm.

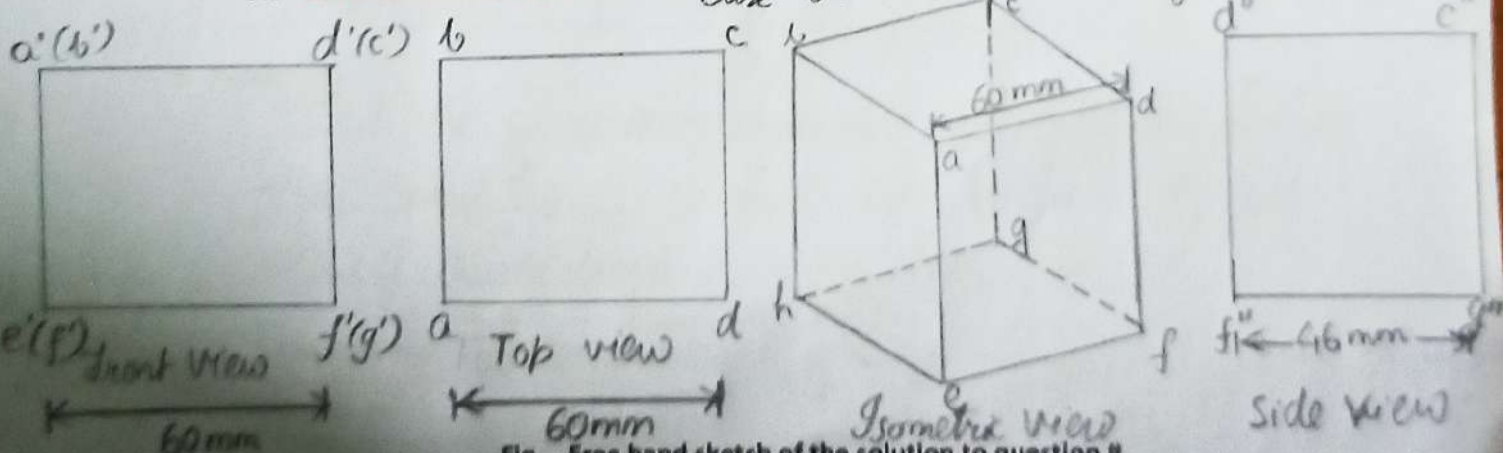

Fig. Free hand sketch of the solution to question #

7.6 **Procedure:**

Step 1.

Using the workspace switching, change drafting into 3D model.

Step 2: Change units - precision to 0 and scale to millimeters and specify limits to (0,0) and (400,400)

Step 3: Using lines and ortho command draw rectangle of 35mm × 35mm.

Step 4: Using 'boundary' command, select the boundary of rectangle.

Step 5: Use 'extrude' command to specify the height of rectangle.

Step 6: From view option, form Model Space and thus select the square and give a layout names & paste FV, TV, SV and ISV resp.

8. **Commands used:**

S.N.	Command	Use
1>	Units	To set precision and insertion scale.
2>	Limits	To specify limits of drawing space.
3>	Lines	To draw lines at any angle.
4>	Ortho	To draw straight lines.
5>	Boundary	To set boundary of selected object in 2D state.
6>	Extrude	To specify projection height
7>	Text	To add text and annotations to object.
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9. **Result:**

With the above commands and procedures followed, the Front view, Top view, Side view and Isometric view of the rectangle is successfully created.

Faculty Name	SARAVANAKUMAR R	Date of Submission	15/11/20
Signature		Marks	