
	<b>INDIAN SCHOOL AL WADI AL KABIR</b>	
<b>Class: XI</b>	<b>Department: SCIENCE 2022 – 2023</b> <b>SUBJECT: ENGINEERING GRAPHICS</b>	<b>Date of completion:</b> <b>14.09.22</b>
<b>Worksheet No:3</b> <b>With Answers</b>	<b>Topic: <u>ORTHOGRAPHIC PROJECTION</u></b> <b><u>OF REGULAR SOLIDS</u></b>	<b>Note: A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT</b>	<b>CLASS: XI</b> <b>SECTION: C</b>	<b>ROLL NO.</b>

### Questions

1. A line AB 60 mm long has its end A, 5 mm from HP and 25 mm from VP. The line is inclined to HP at 30 degrees and parallel to VP. Draw its front view and top view in the first quadrant.
  
2. A circle of 50 mm diameter is having its surface making 45 degrees with HP and perpendicular to VP. Draw its front view and top view.
  
3. Draw the front view and top view of a square pyramid of 40 mm base edges and 50 mm height with its base resting on HP and two of its base sides parallel to VP.
  
4. The frustum of a cone of base diameter = 50 mm and sectioned face diameter = 25 mm and vertical axis = 30 mm is resting on its base. Draw its front view and top view.

5. A regular pentagonal prism, base side 30 mm and height 50 mm is resting on one of its rectangular faces on HP and its pentagonal ends perpendicular to HP and VP. Draw its front view and top view.

6. The frustum of a sphere of 50 mm diameter and 40 mm vertical axis, is resting on HP with its sectioned face horizontal. Draw its front view and top view.

7. Draw the front view and top view of a regular pentagonal pyramid of base edges 25 mm and axis 45 mm long resting on a corner of its base on HP, with a base edge on top, parallel to HP. Its axis is horizontal and parallel to VP.

8. Draw the front view and top view of a hexagonal pyramid, of 25 mm base edges and 50 mm vertical axis, standing on the HP on its base, with two edges of its base parallel to the VP.

### MULTIPLE CHOICE QUESTIONS

1. Plan is the view from -----

- a) Top side
- b) Front side
- c) Bottom side
- d) Side view

2. Write the conditions for first quadrant

- a) Below HP and behind VP
- b) Above HP behind VP
- c) Above HP and in front of VP
- d) None of the above

3. Which one is known as full size scale

- a) Scale 1:1
- b) Isometric scale
- c) Scale 1:2
- d) Scale 5:1

4. A vertical line means a line :

- a) Perpendicular to VP
- b) Parallel to HP
- c) Perpendicular to HP
- d) None of the above

5. A solid has

- a) 2 dimension
- b) 3 dimension
- c) 1 dimension
- d) None of the above

### **ANSWERS-MULTIPLE CHOICE QUESTIONS**

1. a) Top side

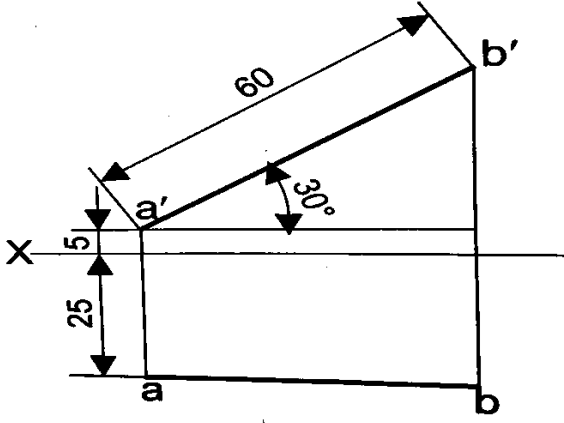
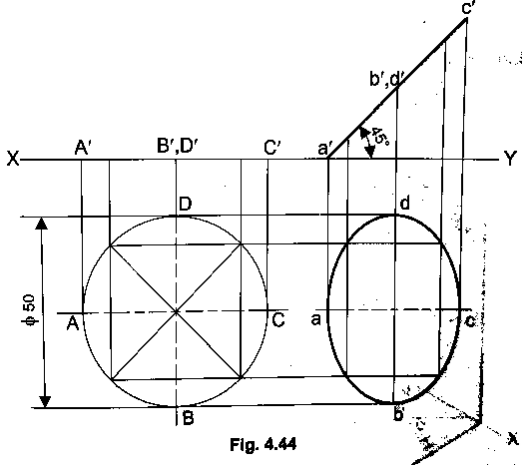
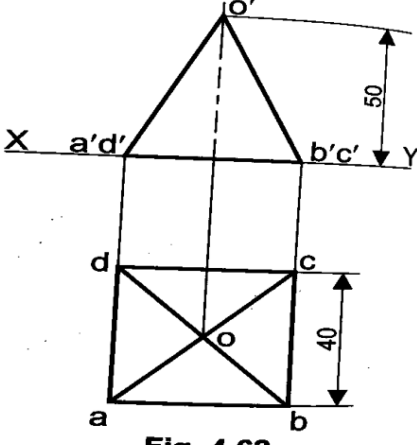
2. c) Above HP and Infront of VP

3. a) Scale 1:1

4. c) Perpendicular to HP

5. b) 3 dimension

**SOLUTIONS FOR DRAWINGS**

<p><b>Q.1</b></p>	 <p>The diagram shows the orthographic projection of a line segment AB. The front view is a'b' and the back view is ab. The front view is inclined at 30° to the XY line. The true length of the line is 60. The front view is 5 units above the XY line, and the back view is 25 units below it.</p>
<p><b>Q.2</b></p>	 <p>The diagram shows the orthographic projection of a cylinder. The front view is an ellipse with a height of 50. The top view is a circle with a diameter of 50. The cylinder is inclined at 30° to the XY line. The front view is 50 units above the XY line, and the top view is 50 units below it.</p> <p align="center"><b>Fig. 4.44</b></p>
<p><b>Q.3</b></p>	 <p>The diagram shows the orthographic projection of a square pyramid. The front view is a triangle with a height of 50. The top view is a square with a side length of 40. The pyramid is inclined at 30° to the XY line. The front view is 50 units above the XY line, and the top view is 40 units below it.</p> <p align="center"><b>Fig. 4.62</b></p>

Q.4

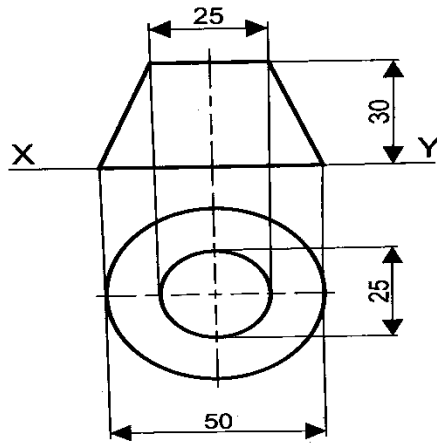


Fig. 4.88

Q.5.

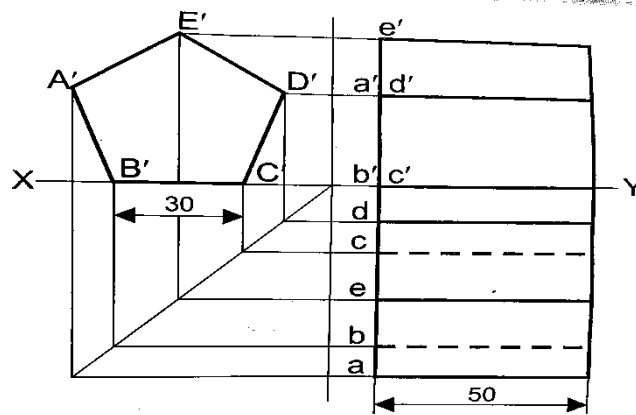
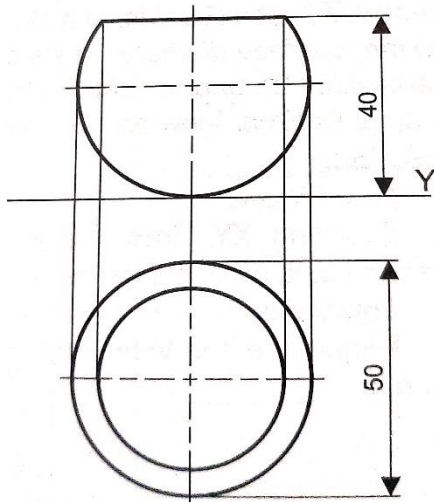


Fig. 4.99

Q.6.



Q.7.

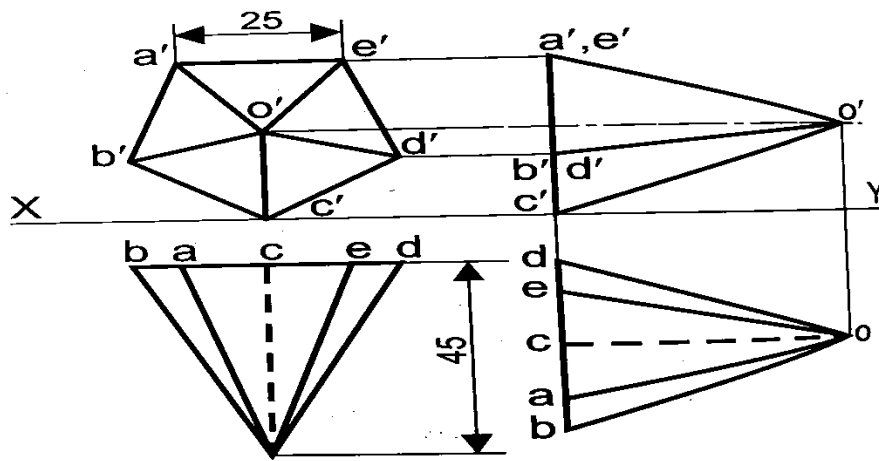
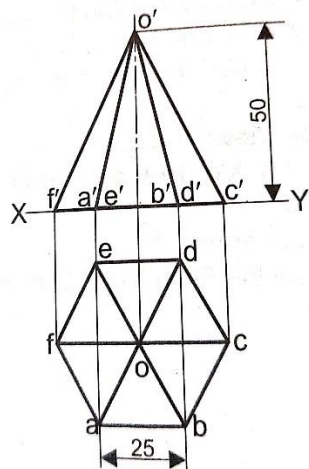


Fig. 4.98

Q.8.



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