

	INDIAN SCHOOL AL WADI AL KABIR		
Class: XI	Department: SCIENCE 2025 – 26 SUBJECT: ENGINEERING GRAPHICS	Date :02.08.2025	
Worksheet No: 3 WITH ANSWERS	UNIT 3: ORTHOGRAPHIC PROJECTIONS OF REGULAR SOLIDS	Note: A4 FILE FORMAT	
NAME OF THE STUDENT		CLASS & SEC: XI B	ROLL NO.

MULTIPLE CHOICE QUESTIONS

1. What is an orthographic projection?

- a) A method to represent a 3D object in 2D views
- b) A method to represent a 3D object using a perspective
- c) A method to represent a 3D object with an isometric view
- d) A method to represent a 3D object by enlarging its dimensions

2. Which of the following is true for orthographic projections?

- a) All views are drawn at different angles
- b) The size of the object is distorted
- c) Views are projected using parallel lines
- d) The views are skewed to give a 3D effect

3. What is the number of views required to completely represent a regular solid in orthographic projection?

- a) Two views
- b) Three views
- c) Four views
- d) One view

4. What is the angle between the top and side views in orthographic projection for regular solids?

- a) 45°
- b) 90°
- c) 60°
- d) 120°

5. Plan is the view from -----

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

6. 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

7. Which one is known as full size scale

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

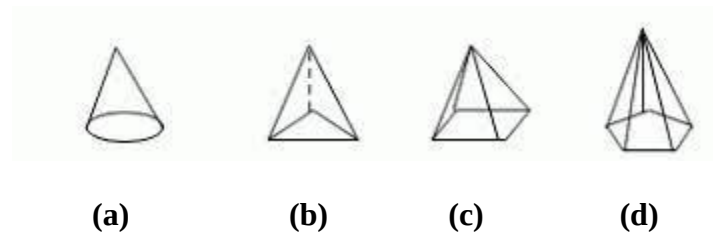
8. A vertical line means a line :

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

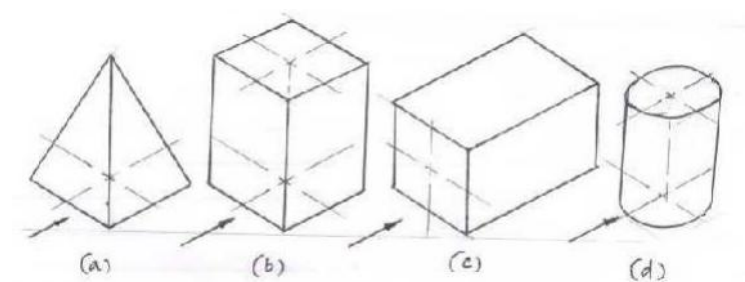
9. A solid has

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

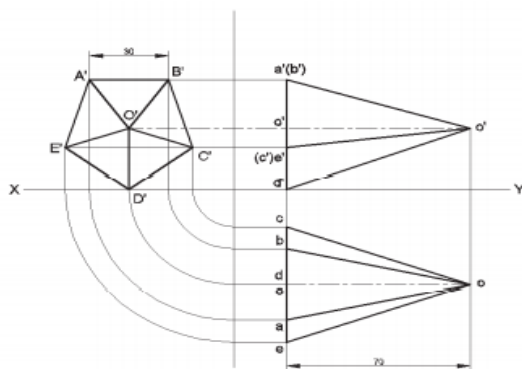
10. A vertical pentagonal pyramid



11. A horizontal solid



12.



In this given figure, identify the position of the axis?

- a) Axis is perpendicular to HP
- b) Axis is perpendicular to VP
- c) Axis is parallel to both HP and VP
- d) Axis is perpendicular to HP and parallel to VP

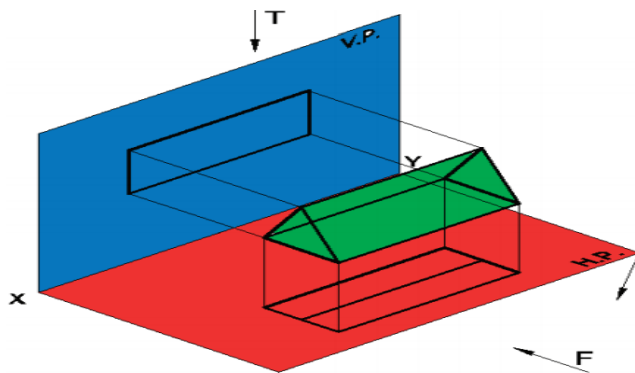
13. Match the LIST I with LIST II

QUADRANT	POSITION OF THE GIVEN POINT
1.First	i. Below HP and behind VP
2.Second	ii. Above HP and in front of VP
3.Third	iii. Below HP and in front of VP
4.Fourth	iv. Above HP and behind VP

- a) 1-iii, 2-iv, 3-i, 4-ii
- b) 1-i, 2-iii, 3-ii, 4-iv
- c) 1-iv, 2-ii, 3-iii, 4-i
- d) 1-ii, 2-iv, 3-i, 4-iii

Q14 to Q16 – Answer Read the following paragraph and answer the following questions.

John is studying in class XI and he is very much interested in drawing, being an engineering graphics student, he sketched the three-dimensional figure of a solid in his drawing book with respect to the principle planes of projections (HP and VP). Analyze the given picture and answer the following questions.



15. Identify the given solid from the figure?

- a) Square prism
- b) Triangular prism
- c) Rectangular prism
- d) Triangular pyramid

15. According to the above given figure the axis line is?

- a) Perpendicular to HP
- b) Parallel to HP and Perpendicular to VP
- c) Perpendicular to HP and VP
- d) Parallel to both HP and VP

16. In this given figure the front view and top view will be?

- a) Rectangle
- b) Triangle
- c) Square
- d) Line

DESCRIPTIVE TYPE 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 degree and parallel to VP. Draw its front view and top view in first quadrant.

2. A circle of 50 mm diameter is having its surface making 45 degree 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.

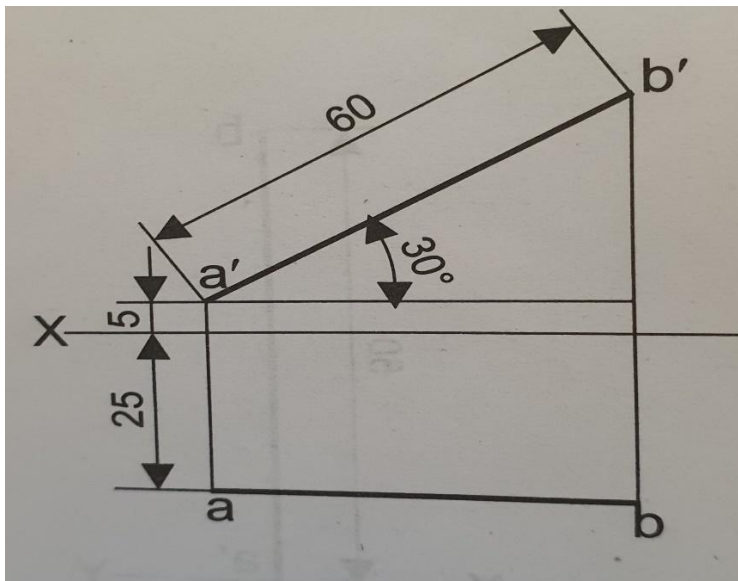
8. Draw the front view and top view of a hexagonal pyramid, of 25 mm base edges and 50 mm vertical axis, standing on the HP on its base, with two edges of its base parallel to the VP.

ANSWER KEY – MULTIPLE CHOICE QUESTIONS	
1	a) A method to represent a 3D object in 2D views
2	c) Views are projected using parallel lines
3	b) Three views
4	b) 90°
5	a) Top side
6	c) Above HP and in front of VP
7	a) Scale 1:1
8	c) Perpendicular to HP
9	b) 3 dimension
10	d)
11	c)
12	c) Axis is parallel to both HP and VP

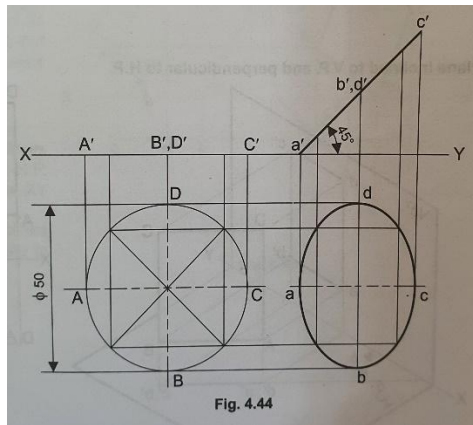
13	d) 1-ii, 2-iv, 3-i,4-iii
14	b) Triangular prism
15	d) Parallel to both HP and VP
16	a) Rectangle

ANSWERS FOR DESCRIPTIVE TYPE QUESTIONS

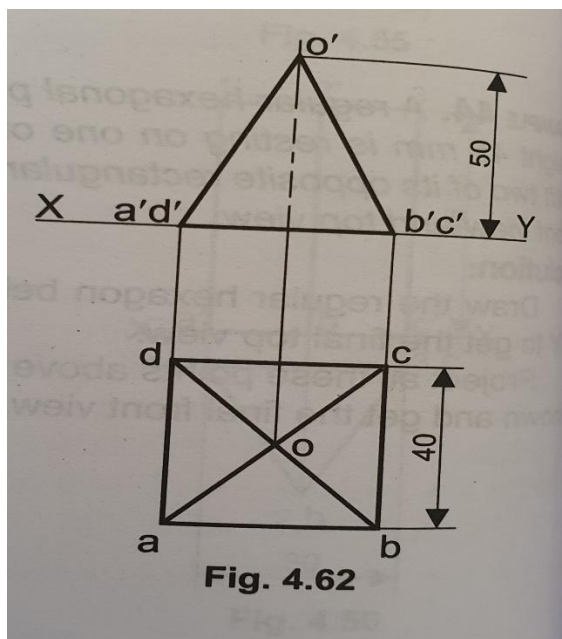
Q.1



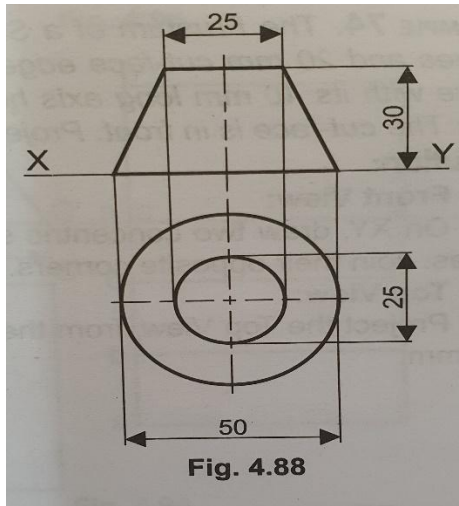
Q.2



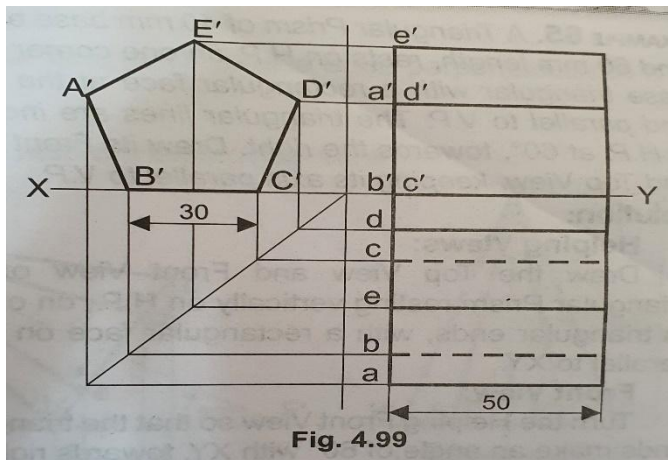
Q.3



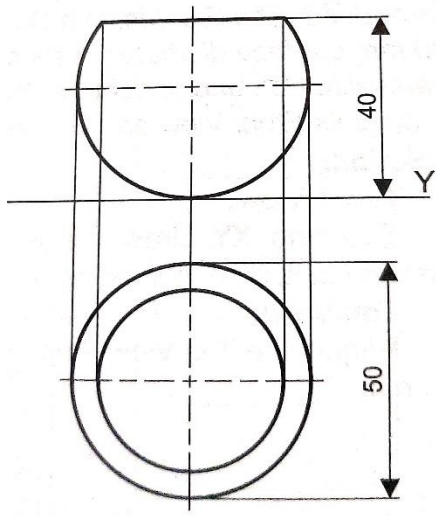
Q.4



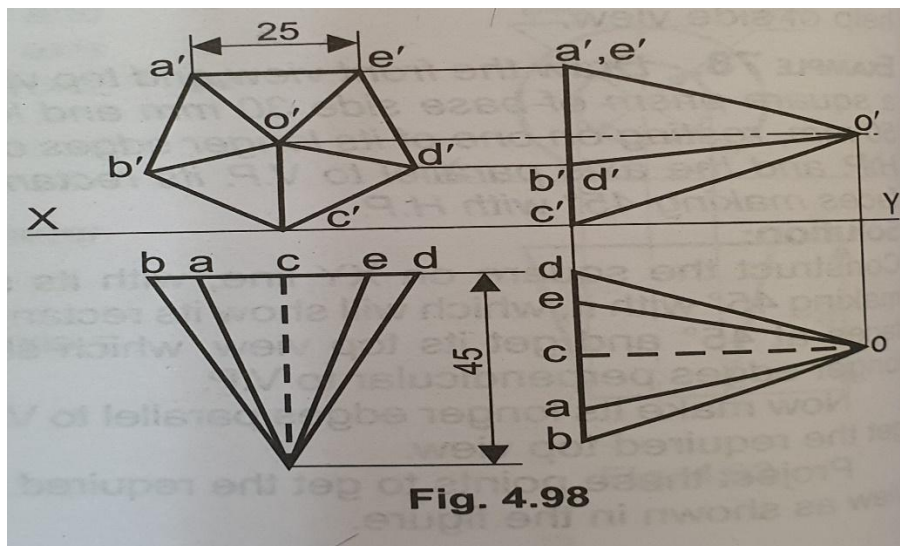
Q.5.



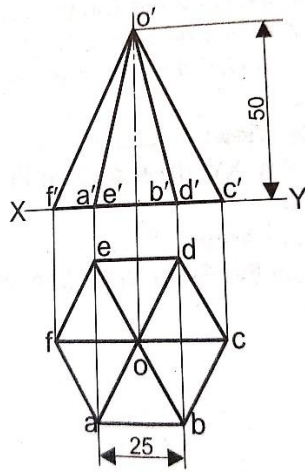
Q.6.



Q.7.



Q.8



<i>Prepared by:</i> <i>Ms. Aiswarya Deepthi. P</i>	<i>Checked by:</i> <i>HOD Science</i>
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