
	INDIAN SCHOOL AL WADI AL KABIR		
Class: XI	Department: SCIENCE – 2023-2024 SUBJECT: <u>ENGINEERING GRAPHICS</u>		Date of Completion: 14.09.23
Worksheet No:4 With Answers	Topic: <u>SECTIONS OF SOLIDS</u>		Note: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS: XI	SECTION:C	ROLL NO:

Questions

1. A sphere of 50 mm diameter resting on HP is cut vertically parallel to VP. Project its top view and sectional front view.

2. A square prism of 45 mm base edges and 45 mm height, resting on HP with all of its vertical rectangular faces, inclined to VP at 45 degree. It is sectioned horizontally 30 mm above its base. Project its front view and sectional top view.

3. A vertical pentagonal prism of 30 mm base edges and 50 mm height, resting on HP on its base with one edge of its base on the back side parallel to VP is sectioned by a plane perpendicular to VP inclined to HP at 60 degree towards the right. Project its front view and sectional top view.

4. A cone of 50 mm base diameter and 60 mm long horizontal axis, is resting on the HP with its vertical base at right angles to VP. It is sectioned by a horizontal plane, above its axis. Project its front view and sectional top view.

5. A triangular pyramid of 50 mm base edges and 60 mm long horizontal axis, is resting on one edge of its base which is at right angles to VP. It is sectioned by an oblique plane, inclined to HP towards the right. Project its front view and sectional top view.

6. A triangular pyramid of 50 mm base edges and 60 mm long horizontal axis, is resting on one edge of its base, which is at right angles to VP. It is sectioned by a horizontal plane above its axis. Project its front view and sectional top view.

7. A hexagonal prism of 25 mm base edges and 60 mm length is resting on one of its rectangular faces on the HP, with its hexagonal ends at right angles to VP. It is cut by an oblique plane inclined to HP towards the left and intersecting the axis at a point 20 mm away from one of its ends. Project its front view and sectional top view.

8. A cylinder of 50 mm base diameter and 60 mm long is resting on HP on its curved surface, with its circular ends at right angles to VP. It is sectioned by a horizontal plane, above its axis. Project its front view and sectional top view.

MULTIPLE CHOICE QUESTIONS

1. Which one of these cannot be obtained by sectioning a cone ?

- a) Parabola
- b) Circle
- c) Ellipse
- d) Square

2. When a vertical rectangle is revolved about one of its sides, its side will generate a -----

- a) Cylinder
- b) Cone
- c) Sphere
- d) Pyramid

3. When the axis of a regular solid is perpendicular to VP, then its base will be seen in :

- a) Front view
- b) Top view
- c) Side view
- d) None of the above

4. Which one of the following is not a principal plane of projection?

- a) HP
- b) VP
- c) PP
- d) None of these

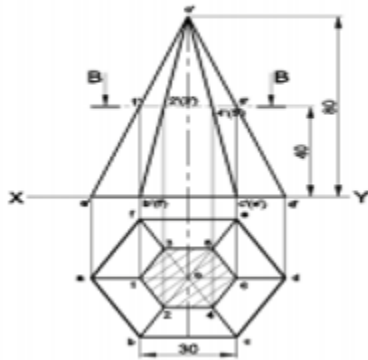
5. A plan of an object is

- a) Left hand side view
- b) Top view
- c) Front view
- d) Right hand side view

Diagram based questions

6.

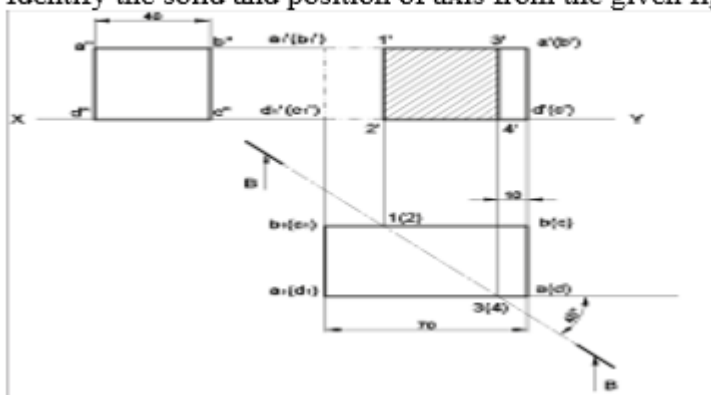
Which type of section plane is happening in this given figure?



- a) Vertical section plane
- b) Horizontal section plane
- c) Oblique section plane
- d) Inclines section plane

7.

Identify the solid and position of axis from the given figure?



- a) Cube and axis parallel to HP and VP
- b) Square prism with axis parallel to VP
- c) Square prism with axis parallel to both HP and VP
- d) Cube with axis perpendicular to VP

Case study type questions

8.

Anne celebrated her birthday last week and she invited all her friends and relatives for her birthday party, she had a nice birthday cap with beautiful decorations on it, being an engineering graphics student, she was very curious on the topic **Sections of solids**, so after the party she sketched the various section planes of her birthday cap and analysed various sectional views. Analyse the figure and answer to the following questions



Identify the solid and the position of the axis?

- a) Cylinder & axis perpendicular to HP
- b) Cone & axis parallel to HP
- c) Cone & axis perpendicular to HP
- d) Cylinder & axis parallel to both HP and VP

9. What will be the front view and top view of this solid?

- a) Triangle & Circle
- b) Circle & Triangle
- c) Rectangle & Circle
- d) Circle & Rectangle

10. If she wants to cut the solid in vertical way where she has to draw the cutting plane?

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

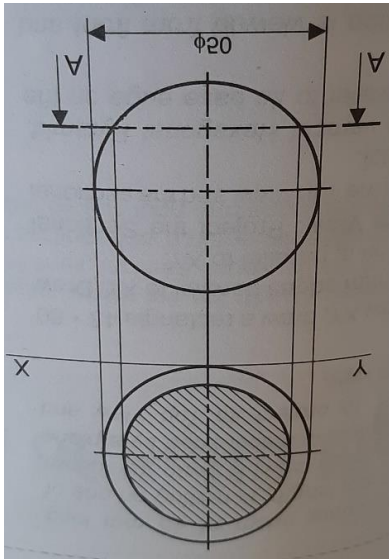
MULTIPLE CHOICE QUESTIONS

ANSWERS

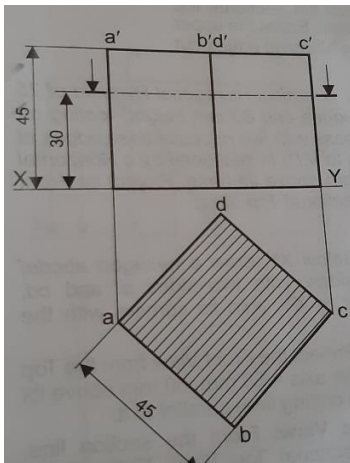
- 1.d) Square
- 2.a) Cylinder
- 3.a) Front view
- 4.c) PP
- 5.b) Top view
- 6.b) Horizontal section plane
7. c) Square prism with axis parallel to both HP and VP
8. c) Cone & axis perpendicular to HP
9. a) Triangle & Circle
10. b) Top view

SOLUTIONS FOR DRAWINGS

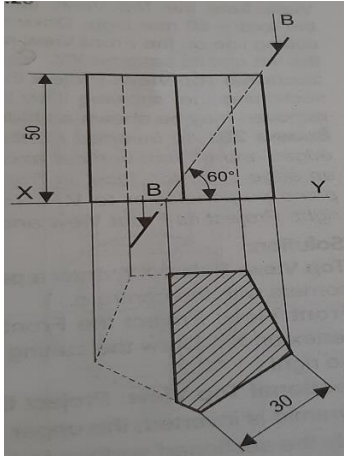
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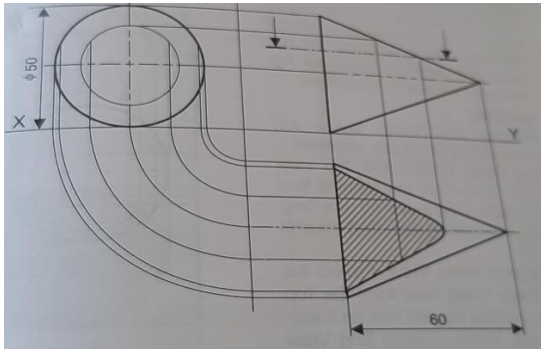
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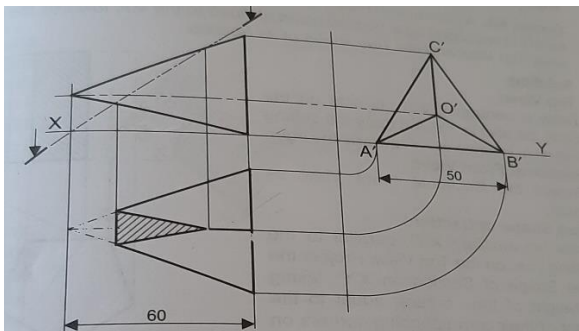
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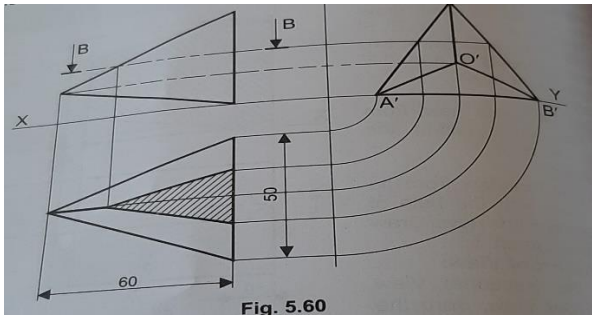
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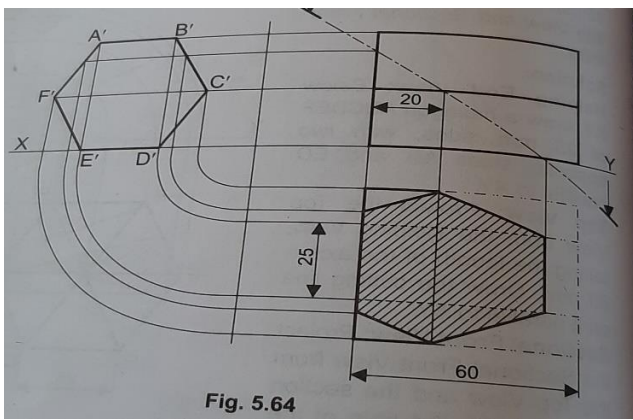
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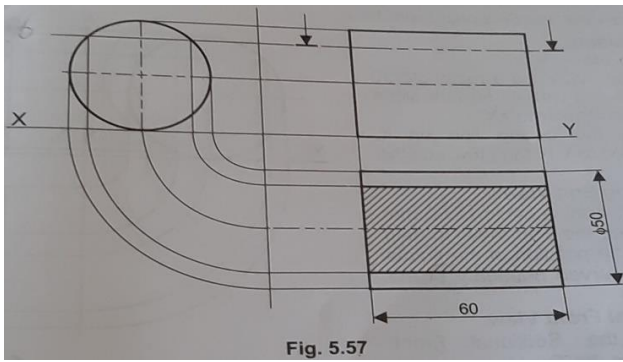
6.



7.



8.



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