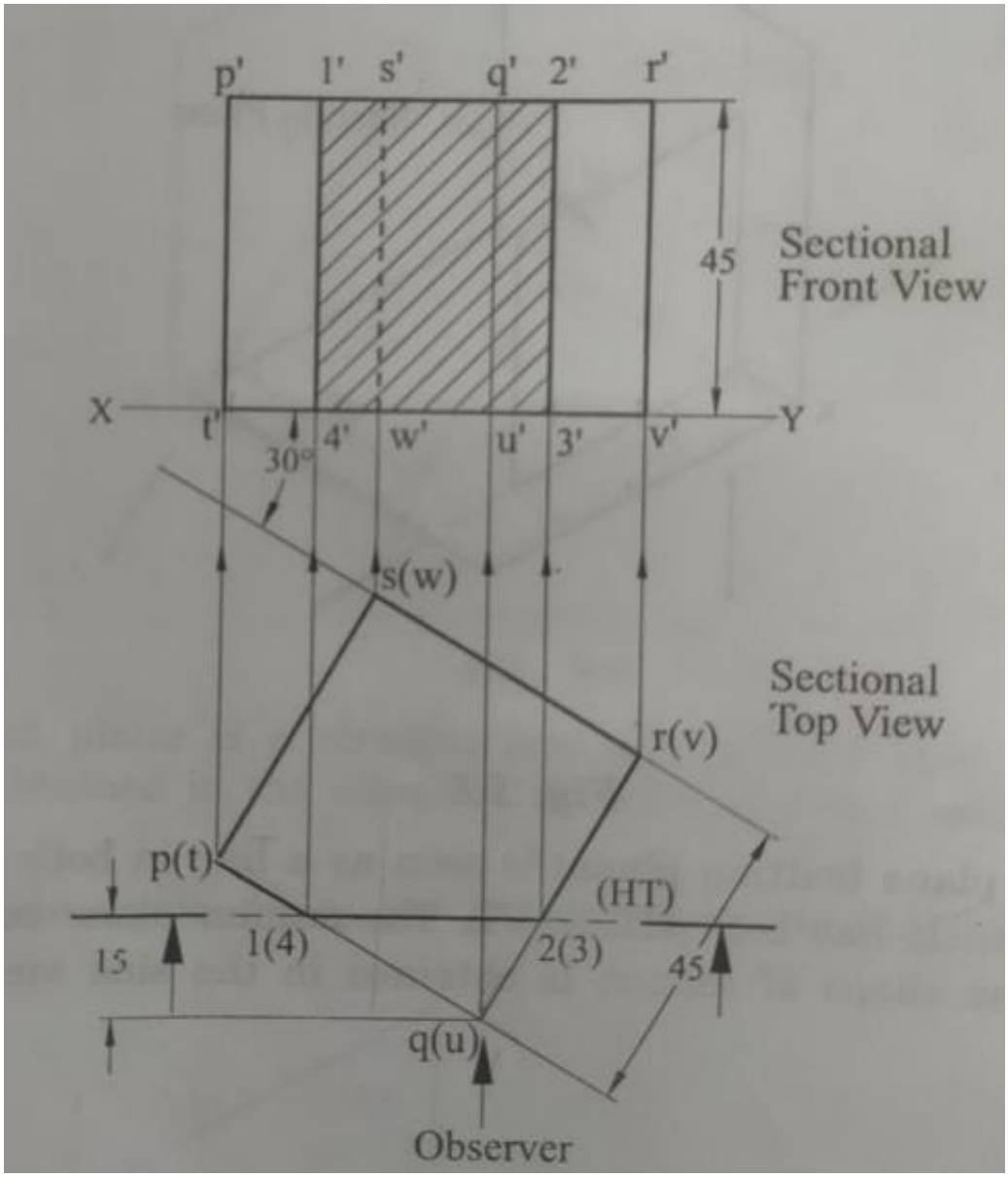
SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES.
(Autonomous)
DEPARTMENT OF MECHANICAL ENGINEERING

23ESC113– Engineering Graphics

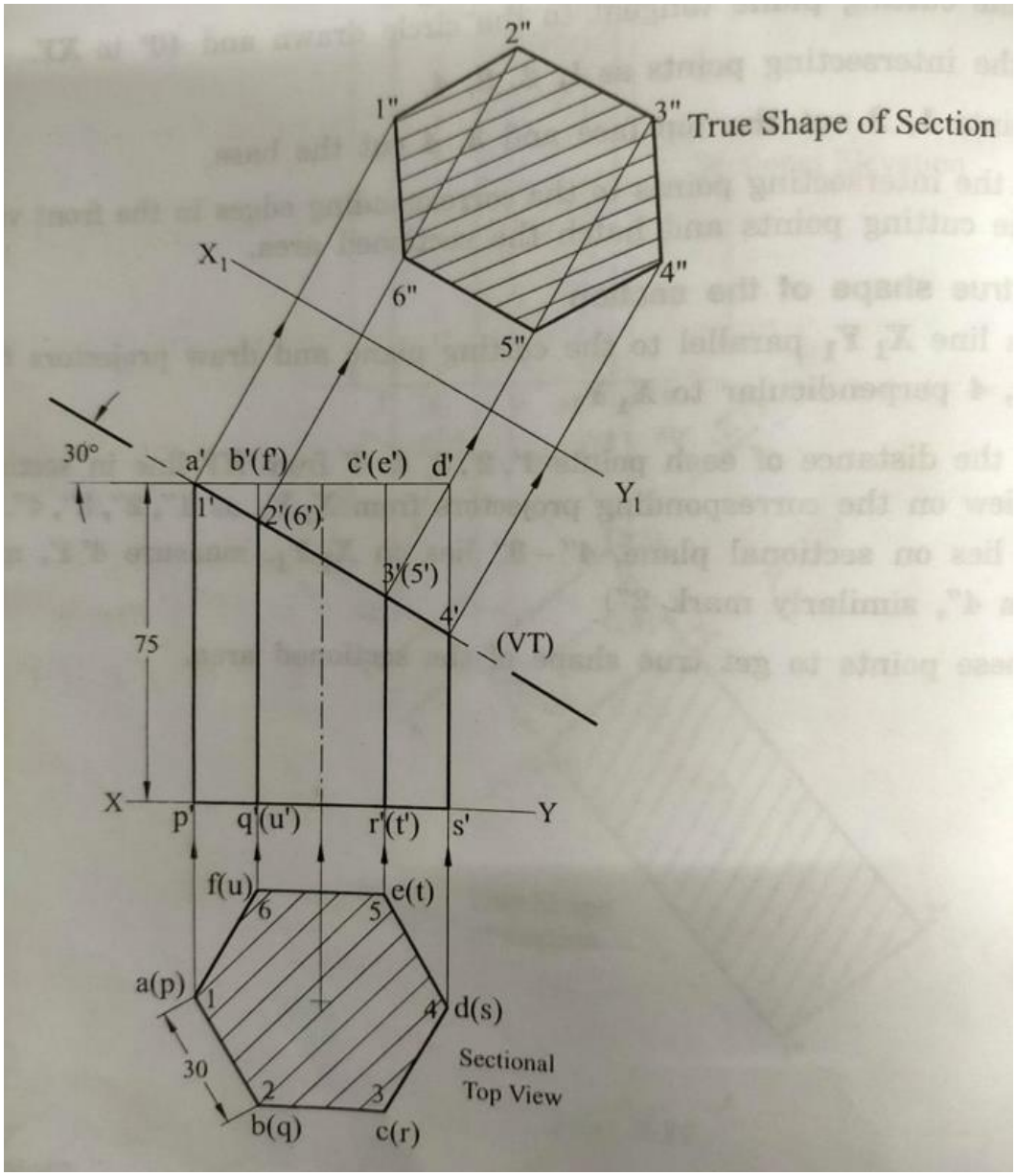
Unit –IV

SECTION OF SOLIDS AND DEVELOPMENT OF SURFACES

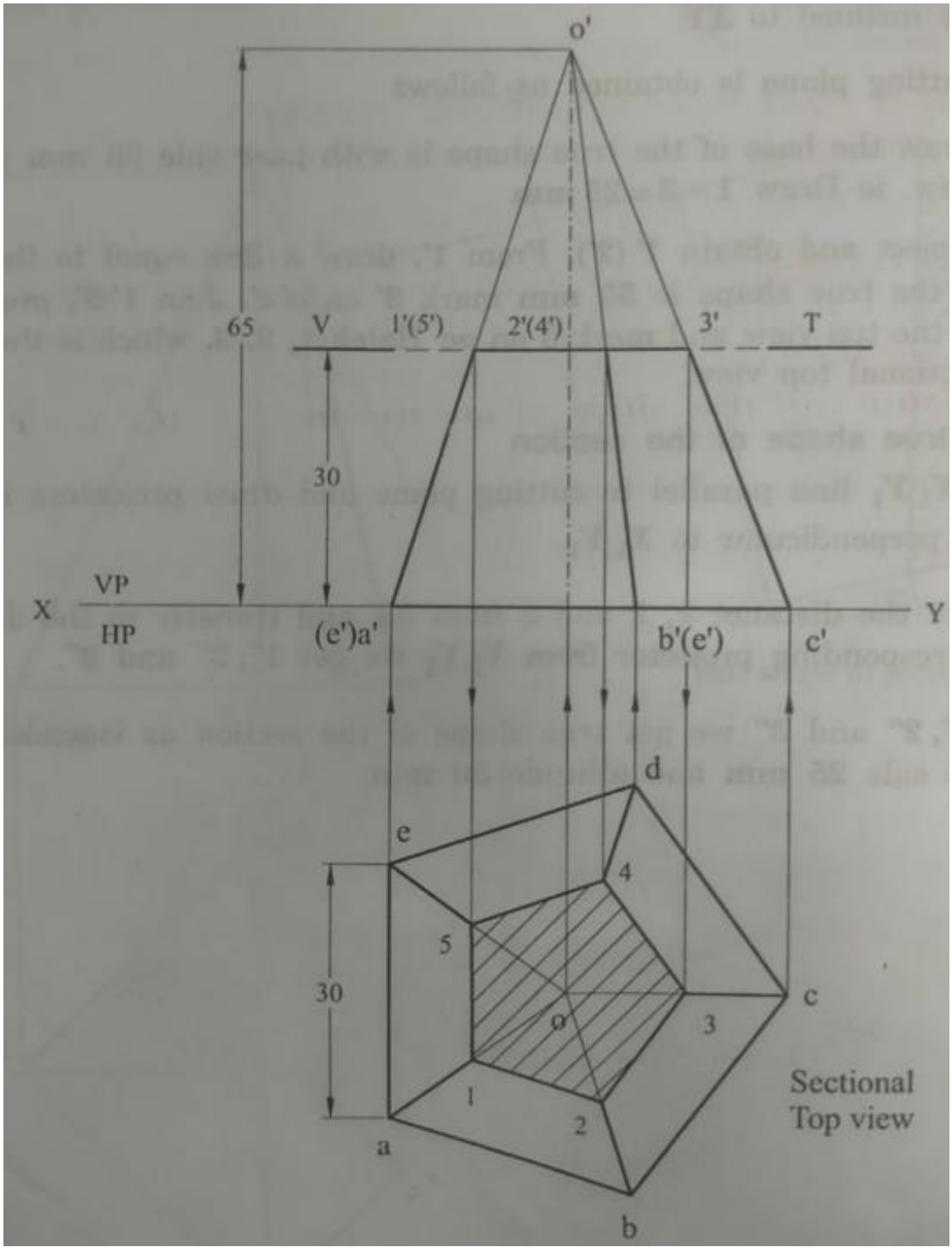
1. **A cube of 45 mm side rest with its face on HP such that one of its vertical face is inclined at 30° to VP. As sectional plane is parallel to VP cuts the cube at a distance of 15 mm from the vertical edge nearer to the observer. Draw its top and sectional views.**



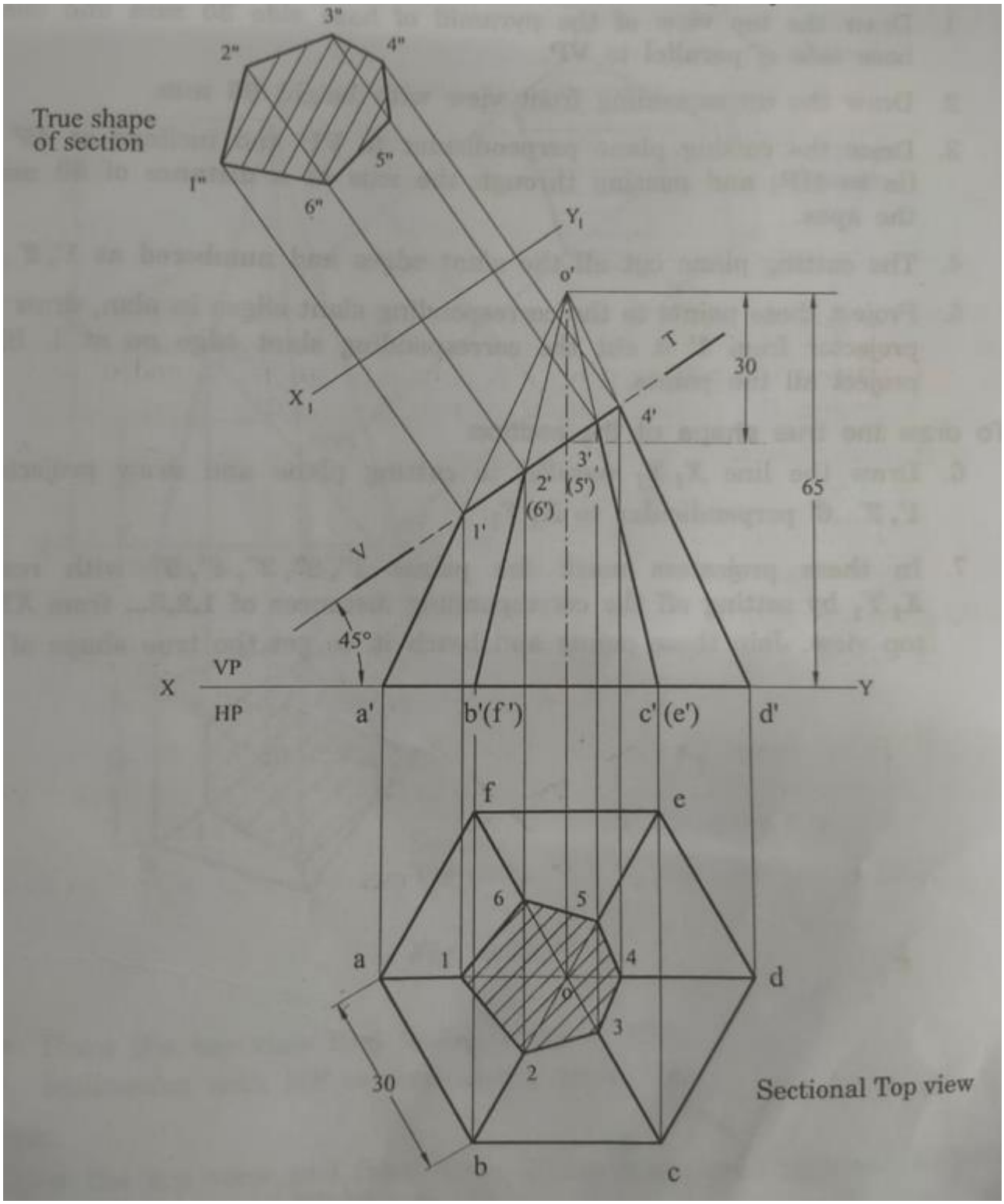
2. **A hexagonal prism of side of base 30 mm and axis 75 mm long resting on its base on HP such that a rectangular face is parallel to VP. It is cut by section plane perpendicular to VP and inclined to HP. The sectional plane is passing through the top of an extreme lateral edge of the prism. Draw the sectional top view and true shape of the section.**



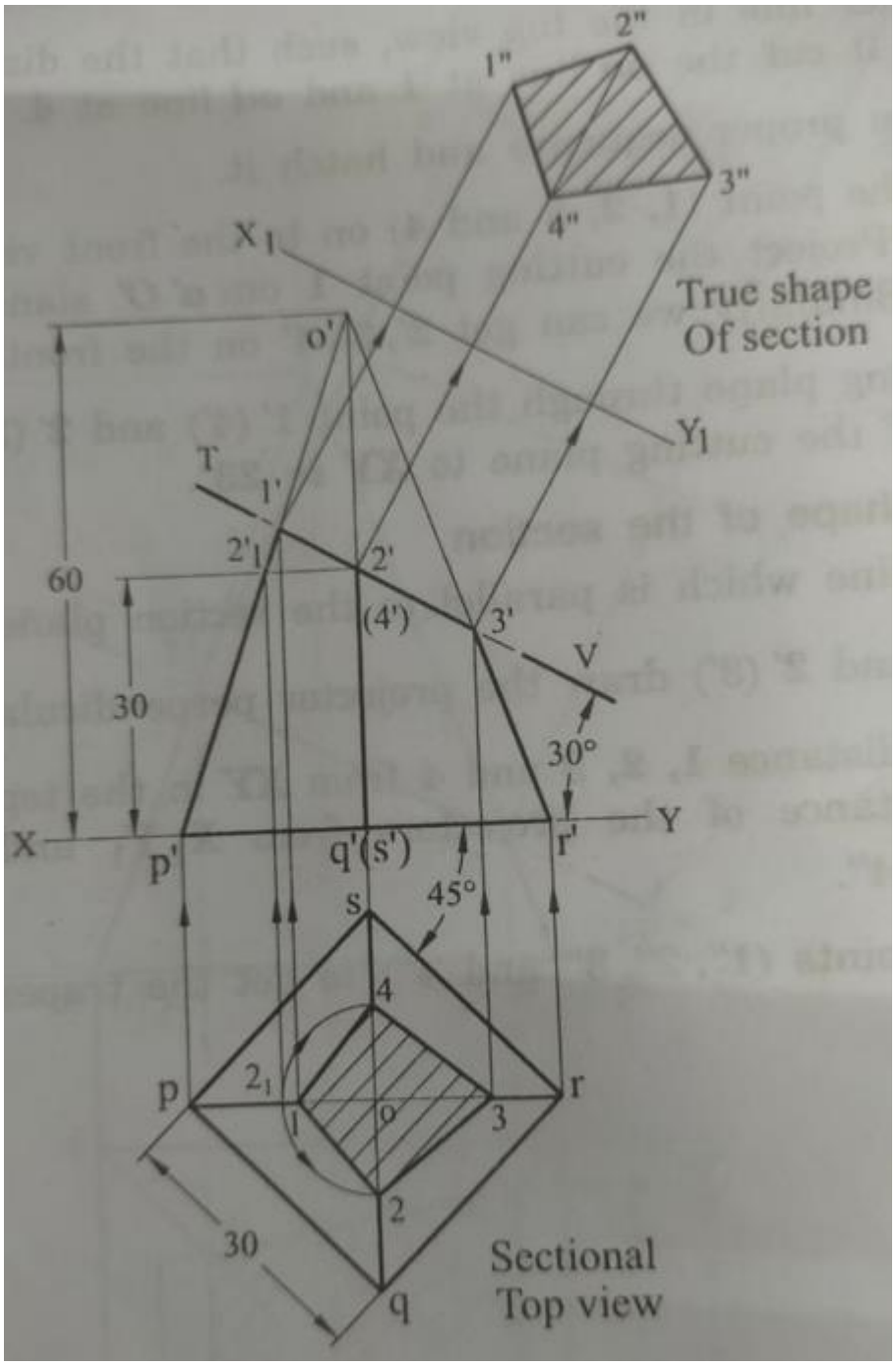
3. **A pentagonal pyramid of side of base 30 mm and axis 65 mm long, rests with its base on HP and one of the edges of its base on HP and one of the edges of its base is perpendicular to VP. It is cut by a section plane perpendicular to VP. It is cut by a section plane perpendicular to VP and parallel to HP and passing through the axis at a point 30 mm above the base. Draw the front and sectional top view.**



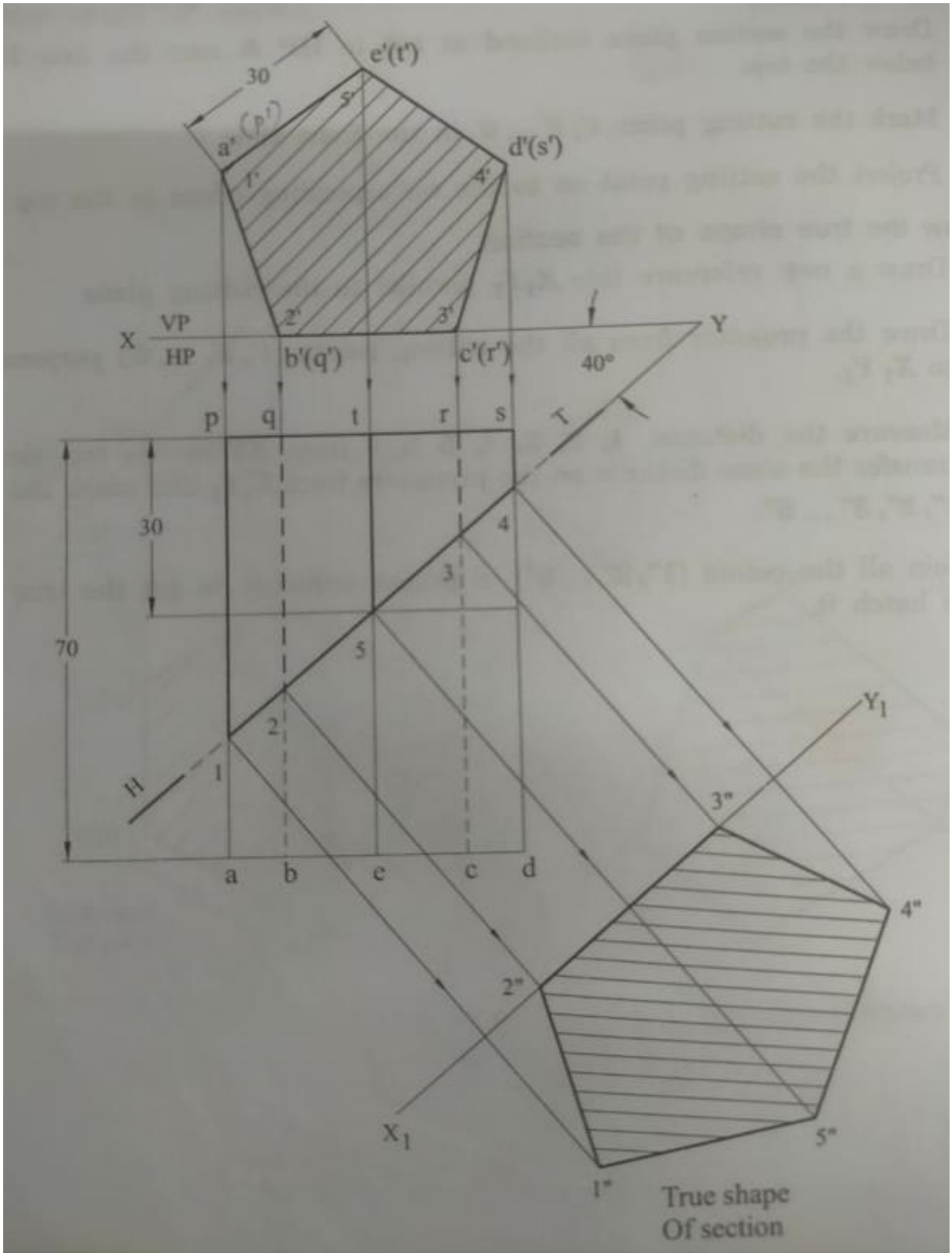
4. **A hexagonal pyramid of side of base is 30 mm and altitude 65 mm long rests with its base on HP with two of its base sides are parallel to VP. It is cut by a section plane perpendicular to VP and inclined at 45° to HP and passing through the axis at a distance of 30 mm from the apex. Draw the sectional top view and true shape of the section.**



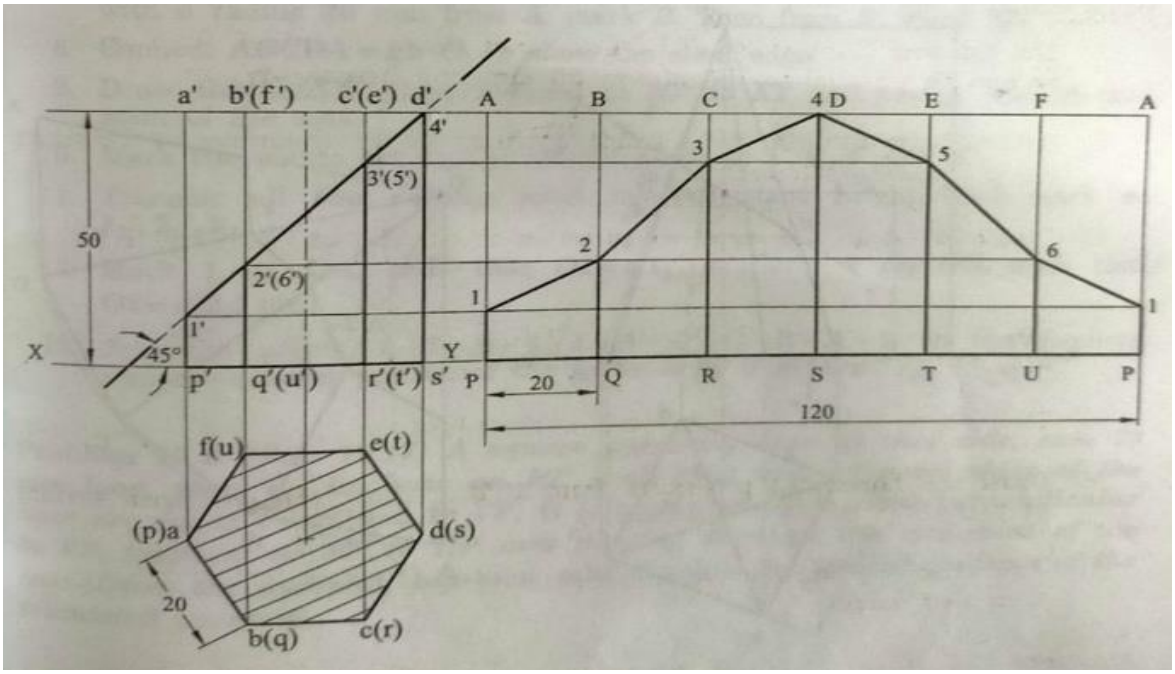
5. **A square pyramid of base side 30 mm and axis 60 mm long is standing on the HP with its base edges are equally inclined to VP. It is cut by a section plane perpendicular to the VP and inclined at 30° to the HP bisecting the axis. Draw the sectional top view and true shape of the sections.**



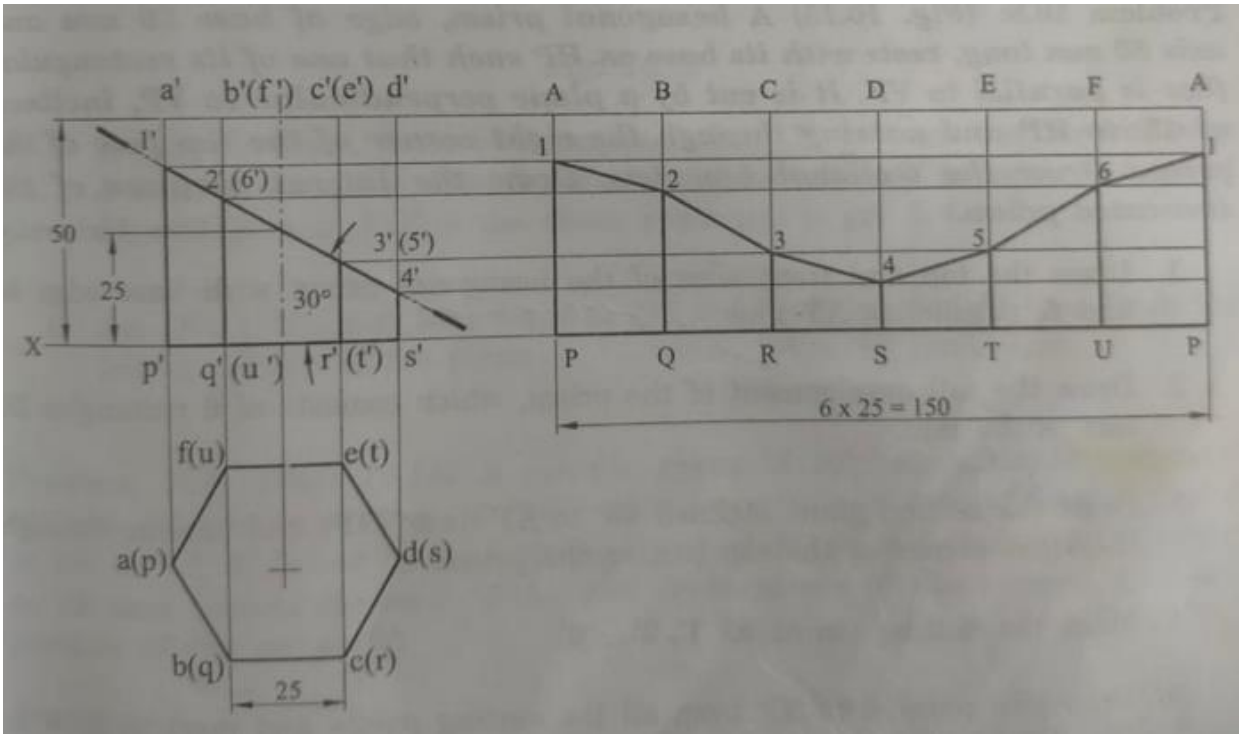
6. **A pentagonal prism of base side 30 mm and axis length 70 mm is resting on HP on one of its rectangular faces, with its axis is perpendicular to VP. It is cut by section plane inclined at 40° to VP and perpendicular to HP and passing through a point 30 mm from rear base of the prism. Draw its top view, sectional front view and true shape of the sections.**



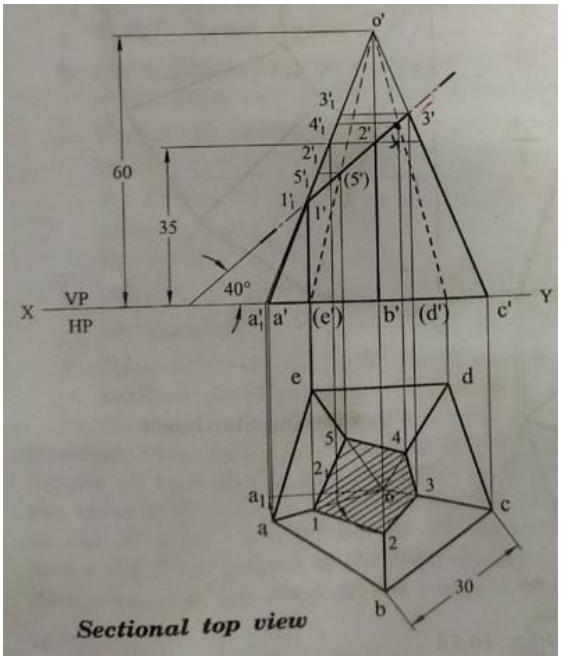
7. **A hexagonal prism of base edge 20 mm and axis 50 mm long, rests with its base on HP such that one of its rectangular face is parallel to VP. It is cut by a section plane perpendicular to VP and inclined at 45° to HP and passing through the right corner of the top of the face of the prism. Draw the sectional top view also draw the lateral surfaces.**

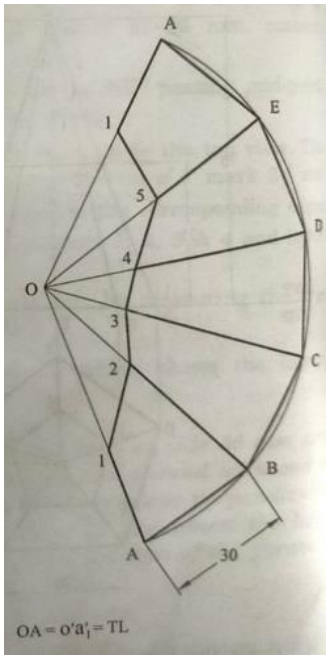


8. **A hexagonal prism of base side 25 mm and height 50 mm is resting on one of its base on the HP and two of its lateral faces are parallel to VP. It is cut by a section plane perpendicular to VP and inclined at 30° to the HP. The plane meets the axis at a distance 25 mm above the base. Draw the development of lateral surface of the prism.**

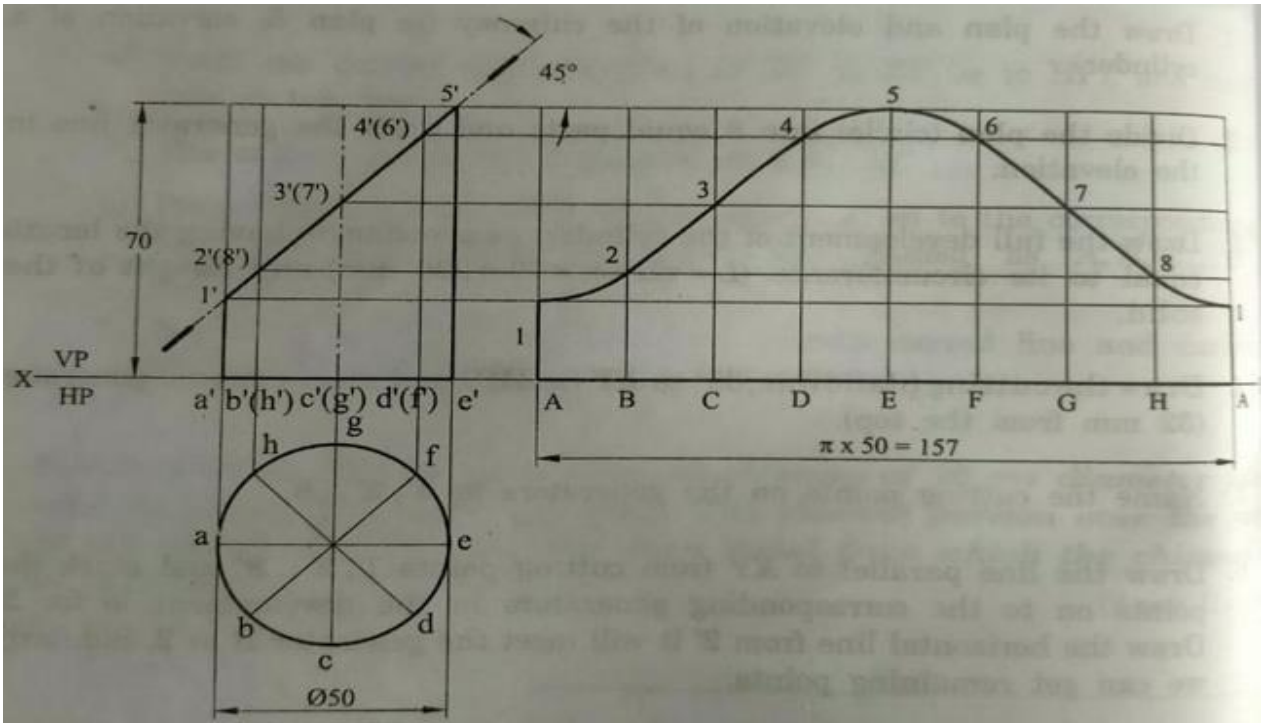


9. **A pentagonal pyramid of base side 30 mm and height 60 mm stands with its base on HP and edge of the base is parallel VP and nearer to it. It is cut by section plane perpendicular to VP and inclined at 40° to the HP and passing through a point on the axis 35 mm above the base. Draw the sectional top view. Develop the lateral surfaces of the sectional top view, also draw the lateral surfaces of the truncated pyramid.**

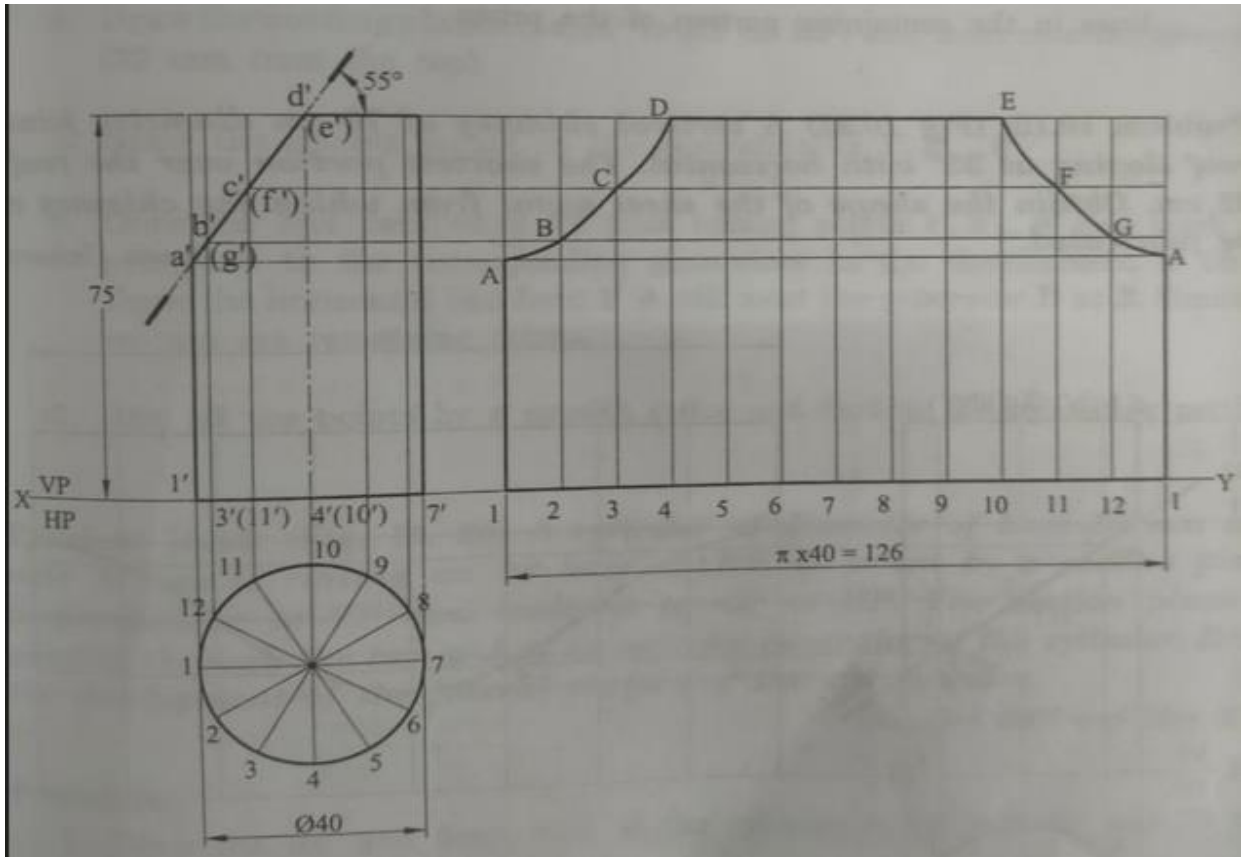




10. **A cylinder of diameter 50 mm and axis 70 mm is resting on its base on the HP. It is cut by section plane perpendicular to VP and inclined at 45° to HP. Th section plane is passing through the top and extreme generator of the cylinder. Draw the development of lateral surface of the cylinder.**



11. A cylinder of diameter 40 mm and height 70 mm is cut by a section plane perpendicular to VP and inclined at 55° to the HP meeting the axis at top face draw the lateral development of cylinder.



12. A cone of base 50 mm diameter and height 70 mm rest with its base on the HP. A section plane perpendicular to VP and inclined at 25° to the HP and bisecting the axis of the cone. Draw the development of lateral surface of the cone.