DEVELOPMENT OF LATERAL SURFACES

1. A rectangular prism of base 40×25mm and height 60mm rests on HP on its base with the longer base side perpendicular to VP. It is cut by a section plane inclined at 45^o to HP; perpendicular to VP and cuts the axis at its mid height. Draw the development of the remaining portion of the prism.
2. A pentagonal prism of base side of base 30mm and axis 70mm long is resting on its base on HP such that one of the rectangular faces is parallel to VP and nearer to it. It is cut by an AIP whose VT is inclined at 45^o with XY line and passes through the axis at a distance of 20 mm from the top end. Draw the development of the lateral surfaces of the prism.
3. A square prism of base side 40mm and axis length 65mm is resting on HP on its base with all the vertical faces being equally inclined to VP. It is cut by an inclined plane 50^o to HP and perpendicular to VP and is passing through a point on the axis at a distance of 15mm from the top face. Draw its development of the lower portion of the prism.
4. A vertical cylinder of 80mm diameter and 100mm high is cut by a section plane perpendicular to VP and inclined at 45^o to HP so as to pass through the top end of one of the extreme generators in the front view. Draw the development of the lateral surface of the truncated cylinder.
5. A vertical cylinder with base diameter 50 mm and axis 80 mm is resting with its base on HP. Such a cylinder is cut in different ways as shown in the front views in figs. D-1 to D-3. Draw the development of the lateral surfaces of the cylinder in each case.

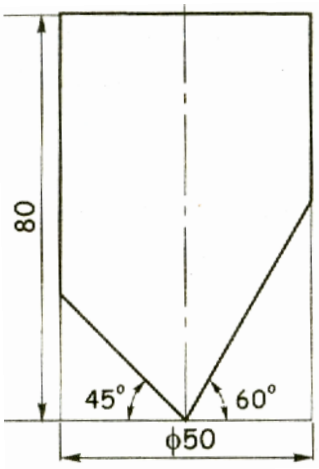

Fig. D-1

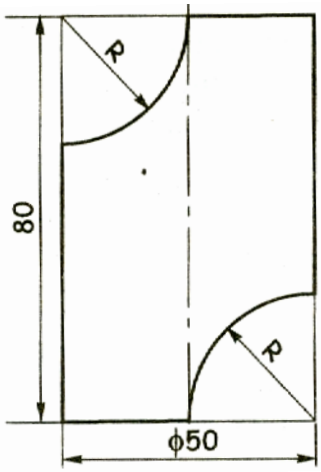

Fig. D-2

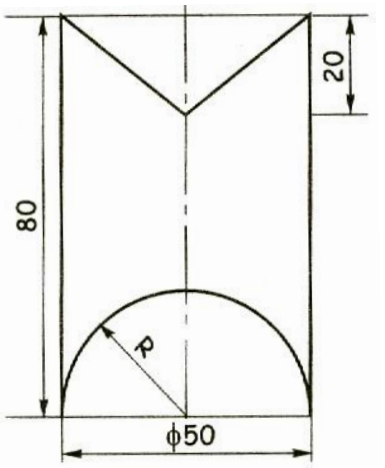

Fig. D-3

6. A square pyramid of side of base 45mm, altitude 70mm is resting with its base on HP with all the edges of the base are equally inclined to VP. The pyramid is cut by a section plane which is perpendicular to the VP and inclined at 45^o to the HP. The cutting plane bisects the axis of the pyramid. Obtain the development of the lateral surfaces the truncated pyramid.
7. A regular pentagonal pyramid of side of base 35mm and altitude 65mm has its base on HP with a side of base perpendicular to VP. The pyramid is cut by a section plane which is perpendicular to the VP and inclined at 30^o to HP. The cutting plane meets the axis of

the pyramid at a point 30mm below the vertex. Obtain the development of the remaining part of the pyramid.

8. A hexagonal pyramid of sides 35mm and altitude 65mm is resting on HP on its base with two of the base sides perpendicular to VP. The pyramid is cut by a plane inclined at 30° to HP and perpendicular to VP and is intersecting the axis at 30mm above the base. Draw the development of the remaining portion of the pyramid.
9. A right cone of base 50mm diameter and 70mm height stands with its base on HP. It is cut by an AIP inclined at 45° to HP bisecting the axis of the cone. Draw the development of the lateral surface of the truncated cone.
10. A cone with base diameter 50mm and axis length 65mm are cut in different ways whose front views are shown in fig. D-4 & D-5. Draw the development of the lateral surface of the retained cone for all the cases.

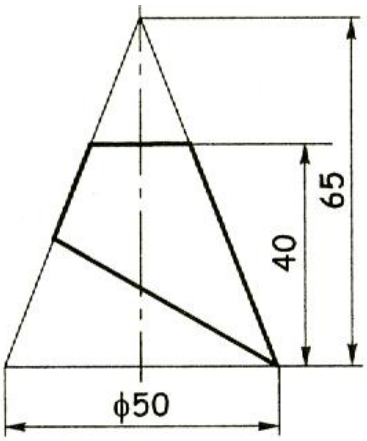

Fig. D-4

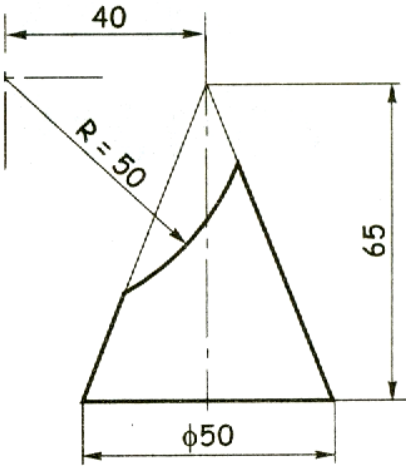

Fig. D-5