**ENGINEERING GRAPHICS**

**QUESTIONS TO BE PRINTED IN THE SKETCH BOOK**

**DEVELOPMENT OF LATERAL SURFACES**

1. A square prism of base side 30mm and axis length 60mm is resting on HP on its base with all the vertical faces being equally inclined to VP. It is cut by an inclined plane 60° to HP and perpendicular to VP and is passing through a point on the axis at a distance 15mm from the top surface. Draw the development of the lower portion of the prism.
2. A rectangular prism of base 30 mm x 20mm and height 60mm rests on HP on its base with a longer base edge inclined at 40° to VP. It is cut by a plane inclined at 45° to HP, perpendicular to VP and bisects the axis. Draw the development of the lateral surface of the prism.
3. A regular pentagonal prism of height 60mm and base edge 30mm rests with its base on HP. The vertical face closest to VP is 30° to it. Draw the development of the truncated prism with its truncated surface is inclined at 60° to its axis and bisecting it.
4. A square pyramid of side of base 45mm, altitude 70mm is resting with its base on HP with two sides of the base parallel to VP. The pyramid is cut by a section plane which is perpendicular to VP and inclined at 60° to HP. The cutting plane bisects the axis of the pyramid. Obtain the development of lateral surfaces of the truncated pyramid.
5. 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° 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.
6. A frustum of a pentagonal pyramid smaller base side 16mm and bigger to face sides 32mm and height 40mm, is resting on HP in its smaller base with one of its base edges parallel to the VP. Draw the projections of the frustum and develop the lateral surface of it.
7. 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.
8. A vertical cylinder of base diameter 45mm and axis length 60mm is cut by a plane perpendicular to VP and inclined at 50° to HP is passing through the center point of the top face. Draw the development of the lateral surface of the cylinder.
9. A vertical cylinder of base diameter 50mm and axis length 60mm is cut by a two planes which are perpendicular to VP and inclined at 45° to HP and passing through either side of the center point of the top face. Draw the development of the lateral surface of the cylinder.
10. A right cone of 55mm diameter of base and 75mm height stands on its base on HP. It is cut to the shape of the truncated cone with its truncated surface inclined at 45° to the axis lying at a distance 40mm from the apex of the cone. Obtain the development of the lateral surface of the truncated cone.