INDIAN INSTITUTES OF TECHNOLOGY (BHU) VARANASI

B. Tech./ M. Tech. (Dual Degree), Part I Odd Semester (2020 -2021)

ME- 104: Engineering Drawing

Development of surface

Sheet No: 7 **Time Allotted – 4 Periods**

1. A right circular cone base diameter 40 mm and height 55 mm, base rest on H.P. Draw its projections and develop the lateral surface of the cone.
2. A right regular pentagonal pyramid, edge of base 30 mm and height 60 mm rests its base on H.P. with an edge of the base perpendicular to V.P. Draw its projections and develop its lateral surface.
3. A cone of base 40 mm diameter and height 60 mm rests with its base on H.P. A section plane perpendicular to V.P and inclined at 30^0 to H.P bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone.
4. A hexagonal prism of side 30 mm and axis 75 mm long, is resting on its base on H.P such that, a rectangular face is parallel to V.P. It is cut by a section plane, perpendicular to V.P and inclined at 30^0 to H.P. The section plane is passing through the top end of an extreme lateral edge of the prism. Draw the development of the lateral surface of the cut prism.
5. A cylinder of diameter of base 40 mm and axis 55 long, is resting on its base on H.P. It is cut by a section plane, perpendicular to V.P and inclined at 45^0 to H.P. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder.
6. A square pyramid, with side of base 30 mm axis 50 mm long, is resting on its base on H.P with an edge of the base parallel to V.P. It is cut by a section plane, perpendicular to V.P and inclined at 45^0 to H.P. The section plane is passing through the mid-point of the axis. Draw the development of the surface of the cut pyramid.