GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY
(**AN AUTONOMOUS INSTITUTION**)
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(Accredited by NAAC with "A" Grade, NBA (EEE,ECE & ME) & ISO 9001 : 2008 Certified Institution)

QUESTION BANK (DESCRIPTIVE)

Subject Name with Code : 22A0302T
Course & Branch: B. Tech – Common to All Branches
Year & Semester: I B.Tech I Sem **Regulation:**RG22

UNIT- I

*** INTRODUCTION TO ENGINEERING DRAWING ***

1		Construct a parabola, with the distance of the focus from the directrix as 50 mm, also draw a normal and tangent to the curve at a point 40 from the directrix.	**[L2] [CO1][14M]**
2		Construct an ellipse, with the distance of the focus from the directrix as 50mm and eccentricity is 2/3. Also draw a normal and tangent to the curve at a point 40 from the directrix	**[L2] [CO1][14M]**
3		Construct an hyperbola, with the distance of the focus from the directrix as 50mm and eccentricity is 3/2. Also draw a normal and tangent to the curve at a point 40 from the focus.	**[L2] [CO1][14M]**
4	a)	A point P is 30mm and 50mm respectively from two straight lines which are at right angles to each other. Draw a rectangular hyperbola from P within 10mm distance from each line.	**[L2] [CO1][7M]**
	b)	The asymptotes of a hyperbola are inclined at 700 to each other. Construct the curve when a point P on it at a distance 20mm and 30mm from two asymptotes.	**[L2] [CO1][7M]**
5		A circle of 40mm diameter rolls along a line for one revolution clockwise. Draw a locus of a point on the circle, with the line. Also draw the tangent and a normal to the curve at a point 35 from the directing line.	**[L2] [CO1][14M]**
6		Draw a cycloid formed by a rolling circle 50mm diameter. Use 12 divisions. Draw a tangent and a normal at a point 30 above the directing line.	**[L2] [CO1][14M]**
7		A circle 40mm diameter rolls on a straight line without slipping. In the initial position, the diameter PQ of the circle is parallel on which it rolls. Draw the locus of the points P and Q for one complete revolution of the circle.	**[L2] [CO1][14M]**
8		A circle of 50mm diameter rolls on a horizontal line half revolution clockwise and then on a inclined 600 to the horizontal for another half clockwise. Draw the curve traced by a point 'P' on the circle, taking the top most point on the rolling circle as the initial position of the generating point.	**[L2] [CO1][14M]**
9		A circle of 60mm diameter rolls without slipping on the outside of another circle of diameter 150mm. Show the path of a point on the periphery of the generating circle, diametrically opposite to the initial point of contact between the circle	**[L2] [CO1][14M]**
10	a)	Draw an epicycloid if a circle of 40mm diameter rolls outside another circle of 120mm diameter for one revolution.	**[L2] [CO1][7M]**
	b)	A circle of 40mm diameter rolls on concave side of another circle of 40mm radius. Draw the path traced by a point on generating circle for one complete revolution	**[L2] [CO1][7M]**

11		Draw a hypo cycloid of a circle of 40mm diameter which rolls inside another circle of 160 mm diameter for one complete revolution counter clockwise.	**[L2] [CO1][14M]**
12		Draw an hypo cycloid, rolling circle diameter is 50mm and directing circle diameter is 175mm. Draw a tangent to it at a point 50mm from the center of the directing circle.	**[L2] [CO1][14M]**
13	a)	Draw an involute of an equilateral triangle of side 20mm.	**[L2] [CO1][7M]**
	b)	Draw the curve traced out by the end of the thick wire unwound from an equilateral triangle of side 20mm, the wire being kept tight.	**[L2] [CO1][7M]**
14	a)	Draw an involute of a regular hexagon of side 25mm. Draw a tangent and normal to the curve at a distance of 100mm from the center of the hexagon	**[L2] [CO1][7M]**
	b)	Draw an involute of a circle 40mm diameter. Draw a tangent and normal to the curve at a point of 95mm from the center of the circle.	**[L2] [CO1][7M]**

UNIT- II

***** PROJECTIONS OF POINTS, LINES AND PLANES *****

1	a)	a) M is 35mm above H.P and 40mm infront of V.P b) N is lying on H.P and 50mm infront of V.P c) P is lying on H.P and 55mm infront of V.P d) Q is lying on V.P and 55mm above H.P	**[L2] [CO2][7M]**
	b)	Draw the projections of the following points in different quadrants 1) point A25 in front of V.P and 30 above H.P 2) point B22 behind V.P and 28 above H.P 3) point C28 behind V.P and 30 below H.P 4) point D40 in front of V.P and 25 below H.P	**[L2] [CO2][7M]**
2	a)	A point 'P' is 25 in front of the V.P and 10 above H.P another point 'Q' is 40 in front of V.P and 25 above H.P. the distance measured between the projectors is 40. Draw the projections and find the distance between P and Q.	**[L2] [CO2][7M]**
	b)	Two points 'A' and 'B are in H.P the point 'A' is 30 in front of the V.P. while 'B' is behind the V.P. the distance between their projections is 75 and the line joining their top view makes an angle of 45 with the xy. Find the distance of the point 'B' from V.P.	**[L2] [CO2][7M]**
3	a)	The point 'A' is on H. P and 40 infront of V. P. Another point of 'B' is on V.P and below H.P.The line joining their front views makes an angle of 45 with the xy,while the line joining their top views makes an angle of 30. Find the distance of 'B' from H.P	**[L2] [CO2][7M]**
	b)	The points P&Q are in the H.P. The point 'p' is the 30 infront of the V.P and Q is behind the V.P. The distance between their projectors is 80 and line joining their top views makes an angle of 40 with xy. Find the distance of Q from the V.P	**[L2] [CO2][7M]**
4	a)	Find the distance between the two points A&B, when B is 40 infront of V.P and below H.P. the distance between the projectors measured along xy, line being 40 below H.P. The distance between the projectors measured along xy, line being 40.	**[L2] [CO2][7M]**
	b)	Two points A&B are on H.P,the points A being 30 infront of V.P while B is 45 behind V.P. The line joining their top views makes an angle 45 with xy. Find the distance between the points.	**[L2] [CO2][7M]**
5	a)	A line AB of 25 mm long, is perpendicular to H.P and parallel to V.P. The end points A and B of the line are 35 mm and 10 mm above H.P respectively. The line is 20 mm in front of V.P draw the projections of the line.	**[L3] [CO3][7M]**
	b)	A line AB of 25 mm long is perpendicular to V.P and parallel to H.P. The end points A and B of the line are 10 mm and 35 mm in front of VP respectively. The line is 20 mm above H.P. Draw its projections.	**[L3] [CO3][7M]**
6	a)	A line AB 30 mm long and inclined at 30^0 to H. P and parallel to V. P. The end A of the line is 15 above H.P and 20 mm in front of V.P. Draw the projections of the line.	**[L3] [CO3][7M]**
	b)	A line AB is 30 mm long and inclined to 30^0 to V.P and parallel to H.P. The end A of the line is 15 above H.P and 20 mm in front of V.P. Draw the projections.	**[L3] [CO3][7M]**
7	a)	The length of the top view of a line parallel to the V.P and inclined at 45^0 to the H.P is 50 mm. One end of the line is 15 mm above H.P and 25 mm in front of the V.P. Draw the projections of the line and determine its true length.	**[L3] [CO3][7M]**
	b)	The front view of a 75 mm long line AB measures 55 mm. The line is parallel to the H.P and one of its ends is in the V.P and 25	**[L3] [CO3][7M]**

		mm above the H.P. Draw the projections of the line and determine its inclination with the V.P.	
8	a)	A 100mm long line AB parallel to and 40 mm above the H.P, Its two ends are25 mm and 50 mm in front of V.P respectively. Draw its projections and find its inclination with the V. P.	**[L3] [CO3][7M]**
	b)	A 90 mm long line CD is parallel to and 25 mm in front of the V.P. Its one end is in the H.P while the other is 50 mm above the H.P. Draw its projections and find its inclination with the H.P.	**[L3] [CO3][7M]**
9		A line AB of 100 mm length is inclined at an angle of 30^0 to H.P and 45^0 to V.P. The point A is 15 above H.P and 20 mm in front of V.P Draw (i)front view (ii) top view.	**[L3] [CO3][14M]**
10		A line measuring 80 mm long has one of its ends 60 mm above H.P and other end is 20 mm in front of V.P. and the other end is 15 mm above H.P. and in front of V.P The front view of the line is 60 mm long. Draw the top view.	**[L3] [CO3][14M]**
11		A line AB of 80 mm long has its end A 15 mm from H.P and V.P. The other end B is 40 above H.P and 50 in front of V.P Draw the projections of the line and determine the inclinations of the line with H.P and V.P.	**[L3] [CO3][14M]**
12		The front view of a 125 mm long line PQ measures 80 mm and its top view measures 100 mm. Its end Q and the midpoint M are in the first quadrant M being 20 from both the planes. Draw the projections of the line.	**[L3] [CO3][14M]**
13		A line AB of 70 mm long has its end A at 10 mm above H.P and 15 mm in front of V.P. Its front view and top view measures 50 mm and 60 mm respectively. Draw the projections of the line and deter mine its inclinations with H.P and V.P.	**[L3] [CO3][14M]**
14		A line AB of 70 mm long has its end A 20 mm above H.P and 15 in front of V.P. The line is inclined 30^0 to H.P and 60^0 to V.P. Draw its projections	**[L3] [CO3][14M]**
15		A square plane ABCD of side 30 mm is parallel to H.P and 20 mm away from it, Draw the projections of the plane, when two of its sides are (i) parallel to V.P (ii) inclined 30^0 to V. P.	**[L3] [CO3][14M]**
16		A rectangular pale of 50x25 size is perpendicular to both H.P and V.P. The longer edges are parallel to H.P and the nearest one is 20 above it. The shorter edge nearer to V.P is 15 from it. The plane is 50 mm from the profile plane. Draw the projections of the plane.	**[L3] [CO3][14M]**
17	a)	A regular hexagonal plane of 30 mm side has a corner at 20 mm away from V.P and 50 mm from H.P. Its surface is inclined at 45^0 to V.P and perpendicular to H.P. Draw the projections of the plane.	**[L3] [CO3][7M]**
	b)	A regular hexagon of 25 side has its one edge on H.P. The surface of the plane is perpendicular to V.P and inclined at 40^0 to H.P. Draw the two views of the plane.	**[L3] [CO3][7M]**
18	a)	A rectangular plane ABCD of size 40 X 25, has the corner A 10 above H.P and 15 in front of V.P. All the sides of the rectangle are equally inclined to H.P. and parallel to V.P. Draw its projections	**[L3] [CO3][7M]**
	b)	Draw the projections of a circle of 60 diameter resting on V.P on a point on the circumference. The plane is inclined at 45^0 to V.P and perpendicular to H.P. The centre of the plane is 40 above H.P.	**[L3] [CO3][7M]**
19		An equilateral triangle plane ABC of side 40 mm has its plane parallel to V.P and 20 mm away from it. Draw the projections of the plane when one of its sides is (i) perpendicular to H.P. (ii) parallel to H.P and (iii) inclined at 45^0 to H.P.	**[L3] [CO3][14M]**

20		A rectangular plane of 60mm*40mm is resting on shorter edge on the ground and inclined 450 to V.P. The plane surface is inclined at 30^0 to H.P. Draw its projections	**[L3] [CO3][14M]**
21		An equilateral triangle of 30mm side with the surface inclined at 60^0 to H.P, lines with one of its sides on H.P. The edge on which it rests is inclined to V.P at 45^0 to V.P. Draw its projections.	**[L3] [CO3][14M]**
22		A regular pentagon of 30mm side, has one of its corners on V.P and its surface is inclined at 60^0 to VP. The edge opposite to the corner on VP makes an angle of 45^0 with HP. Draw the projections of the plane.	**[L3] [CO3][14M]**
23		Draw the projections of a regular hexagon of 25mm side having one of its edges in HP, and inclined at 60^0 to VP and its surface making an angle of 60^0 to HP.	**[L3] [CO3][14M]**
24		Draw the projections of a circle of 50mm diameter resting in the HP on a point A on the circumference, its plane is inclined at 45^0 to the H.P and the top view of the diameter makes an angle of 30^0 to the VP.	**[L3] [CO3][14M]**
25		A square ABCD of 50mm side has its corners A in HP its diagonal AC is inclined at 30^0 to HP and the diagonal BD is inclined at 45^0 to V.P and parallel to HP. Draw its projections	**[L3] [CO3][14M]**

UNIT- III

*** PROJECTIONS OF SOLIDS ***

1	a)	Draw the projections of a cylinder of base 40mm diameter, axis 50mm long resting on ground on its base.	**[L3] [CO4][7M]**
	b)	Draw the projections of a hexagonal pyramid axis 60mm long, base 30mm side having base on the ground and one of edges of base inclined at 45^0 to VP.	**[L3] [CO4][7M]**
2	a)	Draw the projections of a triangular prism base 40mm side and axis 50mm long, resting on one of its bases on HP, with a vertical face perpendicular to VP.	**[L3] [CO4][7M]**
	b)	Draw the projections of a pentagonal pyramid axis 60mm long, base 30mm side having base on the ground and one of edges of base inclined at 45^0 to VP.	**[L3] [CO4][7M]**
3	a)	Draw the projections of a hexagonal prism base 25mm side and axis 60mm long, lies with one of its rectangular faces on HP. Such that axis is parallel to both HP & VP.	**[L3] [CO4][7M]**
	b)	A hexagonal pyramid, side of base 25 mm and height 50mm rests with its base on HP. Such that one of the edges of the base is inclined at 20^0 to VP. Draw the front view and top view of the pyramid.	**[L3] [CO4][7M]**
4	a)	A cylinder of base 35mm diameter and axis 60mm long lies with one of its generators on HP. Such that its axis is parallel to both HP and VP	**[L3] [CO4][7M]**
	b)	Draw the projections of a cube of 40 mm side, resting with a face on HP. Such that one of its vertical faces is inclined at 30^0 to VP.	**[L3] [CO4][7M]**
5		A square prism, side of base 30mm and axis 45mm long lies on HP, such that its axis is parallel to both HP and VP. Draw the front view and top views of the prism when (i) it lies with one of its rectangular faces on HP and (ii) it lies with one of its longer edges on HP.	**[L3] [CO4][14M]**
6	a)	A pentagonal prism side of base 25 mm and axis 50 mm long rest with one of its shorter edges on HP. Such that the base containing that edge makes an angle of 30^0 to VP. And axis is parallel to VP. Draw its projections.	**[L3] [CO4][7M]**
	b)	Draw the projections of a regular hexagonal prism, side of base 25 mm and axis 50 mm long resting with its base on HP. Such that one of its edges of base is inclined at 20^0 to VP	**[L3] [CO4][7M]**
7	a)	A square prism, side of base 35 mm and height of 50 mm rests with its base on HP. Such that one of its rectangular faces is inclined at an angle of 30^0 to VP, Draw its Projections.	**[L3] [CO4][7M]**
	b)	Draw the projections of a right circular cone of base 40 mm diameter and height 60 mm when resting with its base on HP.	**[L3] [CO4][7M]**
8	a)	Projections of a cylinder 60mm diameter and 90mm long. Axis is inclined at 45^0 to HP and parallel to VP.	**[L3] [CO4][7M]**
	b)	A hexagonal Pyramid side of base 25mm and axis 50mm long, rests with one of its edges of its base on HP and its axis is inclined at 30^0 to HP and parallel to VP. Draw its projections.	**[L3] [CO4][7M]**
9		A hexagonal Prism, side of base 25mm and axis 50mm long rests with one its base makes an angle of 60^0 to HP and axis parallel to VP. Draw its projections.	**[L3] [CO4][14M]**
10	a)	Draw the Projections of a square pyramid having one of its triangular faces in the VP and the axis is parallel to and 40mm above HP. Base 30mm side and axis 75mm long.	**[L3] [CO4][7M]**

	b)	Draw the Projections of a cylinder 75mm diameter and 100mm long lying on the ground with its axis inclined at 30^0 to VP and parallel to the ground.	**[L3] [CO4][7M]**
11	a)	Draw the projections of a cone base 70mm diameter and axis 90mm long lying on one of its generators with parallel to VP.	**[L3] [CO4][7M]**
	b)	Draw the projections of hexagonal pyramid with a side of base 30mm and axis 70mm long resting with slant face on HP. Such that axis parallel to VP.	**[L3] [CO4][7M]**
12	a)	Draw the projections of hexagonal pyramid with a side of base 30mm and axis 70mm long resting with slant face on HP. Such that axis parallel to VP.	**[L3] [CO4][7M]**
	b)	Draw the projections of a cone base 70mm diameter and axis 100mm long lying on HP on one of its generators with axis parallel to the VP.	**[L3] [CO4][7M]**
13		Pentagonal Prism base 30mm side and axis 60mm long has an edge of base in HP, axis is inclined at 45^0 to ground and parallel to VP.	**[L3] [CO4][14M]**
14		A hexagonal Prism base 30mm side and axis 75mm long as an edge of the base parallel to HP and inclined at 45^0 to VP. It axis makes an angle of 60^0 with the HP. Draw its Projections.	**[L3] [CO4][14M]**
15		A pentagonal pyramid of edge of base 30mm and length of axis 65mm is resting on a corner of the base on the HP. The triangular face opposite to the corner on the HP is inclined to the HP at 45^0 with its shorter edge inclined to the VP at 60^0. Draw its Projections.	**[L3] [CO4][14M]**
16		Draw the projections of a cone of diameter of base 40mm and axis 60mm long when it is lying on a point of the base on HP with its axis is inclined at 45^0 to HP and perpendicular to VP. Follow Auxiliary method.	**[L3] [CO4][14M]**
17		A Pentagonal pyramid base 40mm side and height 75mm rests on one edge of its base on the ground so that the highest point of the base in 25mm above the ground. Draw its projections when the axis is parallel to the VP. Draw another front view on reference line inclined at 30^0 to edge on which it is resting and show that the base is visible.	**[L3] [CO4][14M]**

UNIT- IV

***** SECTIONS OF SOLIDS *****

1		A right circular cone of 50mm base diameter and of altitude 60mm is lying on base on HP, such that the axis of the cone is parallel to VP. It is cut by a section plane parallel to HP and perpendicular to VP and 30mm above HP. Draw the sectional plan and elevation of the solid.	**[L3] [CO5][14M]**
2		A cylinder of base diameter 50mm and axis 70mm long resting on HP with its base, such that the axis of the cylinder is parallel to VP. It is cut by a section plane parallel to HP and perpendicular to VP and 40mm above HP. Draw the sectional plan and elevation of the solid.	**[L3] [CO5][14M]**
3		A cone of base diameter 50mm and axis length 60mm is resting on HP on its base. It is cut by a section plane is perpendicular to HP and parallel to VP and 15mm in front of axis. Draw the top view and sectional front view.	**[L3] [CO5][14M]**
4		A cylinder of base diameter 60mm and axis 75mm long resting on VP with its base, such that the axis of the cylinder is parallel to HP. It is cut by a section plane parallel to VP and perpendicular to HP and 10mm infront of VP. Draw the top view and sectional front view	**[L3] [CO5][14M]**
5		A pentagonal prism of base side 30mm and axis length 60mm is resting on HP on one of its rectangular faces, with its axis perpendicular to VP. Axis is inclined at 40^0 to VP. It is cut by a plane perpendicular to HP and passing through the point 25mm from front of base of the prism. Draw the top view and sectional front view	**[L3] [CO5][14M]**
6		A square pyramid of base 30mm and axis length 60mm is resting on HP on its base with a side is inclined at 30^0 to VP, It is cut by a plane perpendicular to both HP and VP and is 10mm away from the axis. Draw its top view, front view and sectional side view.	**[L3] [CO5][14M]**
7		A cone of base diameter 50mm and axis length 75mm is resting on HP on its base is cut by plane inclined at 45^0 to HP and perpendicular to VP and is bisecting the axis. Draw the front view, sectional top view and true of the section.	**[L3] [CO5][14M]**
8		A hexagonal pyramid side of the base 30mm and altitude 70mm rests with its base on HP and with a side parallel to VP. It is cut by a cutting plane inclined at 35^0 to HP and perpendicular to VP and is bisecting the axis. Draw the sectional plan of the pyramid and true shape of the section.	**[L3] [CO5][14M]**
9		A cylinder of base diameter 45mm and height 65mm rests on its base on HP. It is cut by a plane perpendicular to VP and inclined at 30^0 to HP and meets the axis at a distance of 30mm from the base. Draw the front view, sectional top view and true of the section.	**[L3] [CO5][14M]**
10		A cube of 65mm long edges has its vertical faces equally inclined to the VP. It is cut by a section plane perpendicular to the VP. So that true shape of the section is regular hexagon. Determine the inclination of the cutting plane with the HP and draw the sectional top view and true shape of the section.	**[L3] [CO5][14M]**
11		A tetrahedron of 65mm long edges is lying on HP on one of its faces with an edge perpendicular to VP. It is cut by a section plane which is perpendicular to the VP. So that the true shape of the section is an isosceles triangle of base 50mm long and altitude 40mm. Find the inclination of the sectional plane with the HP and draw the front view, sectional top view and true of the section.	**[L3] [CO5][14M]**

12		A cone of base diameter 50mm and axis length 60mm is resting on HP on its base. It is cut by a plane is inclined at 40^0 to VP and perpendicular to HP that cuts the cone at distance 10mm from the axis and infront of it. Draw its top view, sectional front view and true shape of the section.	**[L3] [CO5][14M]**
13		A cylinder of base diameter 40mm and axis length 60mm is resting on HP one of its generators with its axis parallel to HP. It is cut by a plane inclined at 40^0 to VP and perpendicular to HP and is bisecting the axis of the cylinder. Draw its top view, sectional front view and true shape of the section.	**[L3] [CO5][14M]**
14		A hexagonal prism of side 50mm is resting on HP on one of its base with two vertical faces being parallel to VP. It is cut by a cutting plane inclined at 45^0 to VP and is 8mm away from the axis. Draw its top view, sectional front view and true shape of the section.	**[L3] [CO5][14M]**

UNIT- V

*** DEVELOPMENT OF SURFACES ***

1		Draw the projections of a cylinder of base 40mm diameter, axis 50mm long resting on ground on its base. Also draw the development of the lateral surface of the solid	**[L3] [CO6][14M]**
2	`	Draw the projections of a pentagonal pyramid axis 60mm long, base 30mm side having base on the ground and one of edges of base inclined at 45^0 to VP. Also draw the development of the lateral surface of the solid.	**[L3] [CO6][14M]**
3		A hexagonal prism side of base 25 mm and axis 50 mm long rest with one of its shorter edges on HP. Such that the base containing that edge makes an angle of 30^0 to VP. And axis is parallel to VP. Draw its projections. Also draw the development of the lateral surface of the solid.	**[L3] [CO6][14M]**
4	a)	A square prism, side of base 35 mm and height of 50 mm rests with its base on HP. Such that one of its rectangular faces is inclined at an angle of 30^0 to VP, Draw its Projections. Also draw the development of the lateral surface of the solid.	**[L3] [CO6][7M]**
	b)	Draw the projections of a right circular cone of base 40 mm diameter and height 60 mm when resting with its base on HP. Also draw the development of the lateral surface of the solid.	**[L3] [CO6][7M]**
5		A pentagonal pyramid, side of base 30 mm and height 60 mm, stands with its base on HP and an edge of the base is parallel to VP and nearer to it. It is cut by a plane perpendicular to VP, inclined at 40° to HP and passing through a point on the axis, 32 mm above the base. Draw the sectional top view. Develop the lateral surfaces of the truncated pyramid.	**[L3] [CO6][14M]**
6		A pentagonal pyramid, side of base 30 mm and height 60 mm, stands with its base on HP and an edge of the base is parallel to VP and nearer to it. It is cut by a plane perpendicular to VP, inclined at 40° to HP and passing through a point on the axis, 32 mm above the base. Draw the sectional top view. Develop the lateral surfaces of the truncated pyramid.	**[L3] [CO6][14M]**
7		A regular hexagonal pyramid side of base 30 mm and height 60 mm is resting vertically on its base on HP. Such that two of its sides of the base are perpendicular to VP. It is cut by a plane inclined at 40° to HP and perpendicular to VP. The cutting plane bisects the axis of the pyramid. Obtain the development of the lateral surfaces of the truncated pyramid.	**[L3] [CO6][14M]**
8		A square pyramid, with side of base 30 and axis 50 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.	**[L3] [CO6][14M]**
9		A hexagonal prism, having base with a 30 mm side and a 70 mm axis, is resting on its base on the ground with a side of base inclined at 45° to the V.P. It is cut by an auxiliary inclined plane making an angle of 45° with the H.P. and passing through a point 15 mm below the top end of the axis. Obtain the development of the lateral surface of the truncated prism.	**[L3] [CO6][14M]**
10		A cylinder of base diameter 50mm and axis 70mm is resting on ground with its axis vertical. It is cut by a sectional plane perpendicular to VP, inclined at 45^0 to the HP, passing through the top of a generator and cuts all other generators. . Draw the development of its lateral surface.	**[L3] [CO6][14M]**

11		A pentagonal prism of base side 30 mm and axis 70 mm is resting on its base on the H.P. with a rectangular face parallel to the V.P. It is cut by an auxiliary inclined plane (A.I.P.) whose V.T. is inclined at 45° to the reference line and passes through the mid- point of the axis. Draw the development of the lateral surface of the truncated prism.	**[L3] [CO6][14M]**
12		A cube of 50 edge, is resting on a face on H.P such that, a vertical face is inclined at 30° to V.P. It is cut by a section plane perpendicular to V.P and inclined to H.P at 30° and passing through a point at 12 from the top end of the axis. Develop the lateral surface of the lower portion of the cube	**[L3] [CO6][14M]**

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