Enroll. No. _____

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

ADITYA SILVER OAK INSTITUTE OF TECHNOLOGY

BE - SEMESTER–II • MID SEMESTER-II EXAMINATION – SUMMER 2019

SUBJECT: ENGINEERING GRAPHICS & DESIGN (3110013) (IT/ME/CL/AE)

DATE: 25-04-2019 TIME: 10:30 am to 12:15 pm TOTAL MARKS:40

Instructions: 1. All the questions are compulsory.
2. Figures to the right indicate full marks.
3. Assume suitable data if required.

Q.1	(a)	Give complete classification of solids.	[03]
	(b)	What do you mean by development of surfaces? Give its applications.	[03]
	(c)	A pentagon plate, side 40mm is resting on H.P. on one of its corners. The plate is inclined to H.P. by 45° and perpendicular to VP. Draw its projections.	[04]
Q.2	(a)	A rhombus is having its diagonals 100 mm and 50 mm long. Draw projections of rhombus when longer diagonal is inclined at 30° to HP and 30° to VP.	[06]
	(b)	A wheel of diameter 40 mm rolls on a straight horizontal road. Draw the locus of a point P on the periphery of the wheel for one revolution of the wheel, if P is initially on the road. Name the curve.	[05]
	(c)	Construct involute of Pentagon of side 20 mm.	[04]
		OR	
Q.2	(a)	A 30°-60° set square has its shorter side 50 mm long and it is in HP. The top view of the set square is an isosceles triangle and hypotenuse of the set square is inclined at an angle of 40° with VP. Draw the projections of the set square.	[06]
	(b)	Draw the superior epitrochoid generated by the moving point P which is 35 mm from the centre of rolling circle. Rolling circle radius is 30 mm and directing circle radius is 90 mm.	[05]
	(c)	Construct the Involute of circle of 40 mm diameter for one turn.	[04]
Q.3	(a)	Draw the projection of a cone, base 44 mm diameter and axis 50 mm long, when it is resting on the H.P. on a point of its base circle with the axis making an angle of 45° with H.P. and 30° with V.P.	[06]
	(b)	Circle of 50 mm diameter is resting on VP on a point of its circumference. Plane is inclined to VP, such that the elevation of it is an ellipse of minor axis 25 mm and elevation of the diameter through the point, is making an angle of 45° with HP. Draw the projections.	[05]
	(c)	Develop only the lateral surfaces of pentagonal prism resting on HP on its base with one edge perpendicular to VP. Take edge of the base as 30 mm.	[04]
		OR	
Q.3	(a)	A hexagonal Prism, side of base 30 mm and height 60 mm, is standing upright with base on H.P. one side of the base and axis are parallel to V.P. It is cut by section plane making an angle of 60° to H.P. and crossing the axis 10 mm from the top. Draw sectional top view, front view and true shape of section.	[06]
	(b)	A thin composite plate consists of a square ABCD of 50 mm sides with an additional semi- circle constructed on CD as a diameter. The side AB is in the VP and makes 30° with HP and surface of a plate makes 45° with VP. Draw the projections.	[05]
	(c)	Draw development of lateral surface of a cone of base dia. 40 mm and axis 60 mm.	[04]