P P SAVANI UNIVERSITY

First Semester of B. Tech. Examination
November 2022
SEME1010 Engineering Graphics

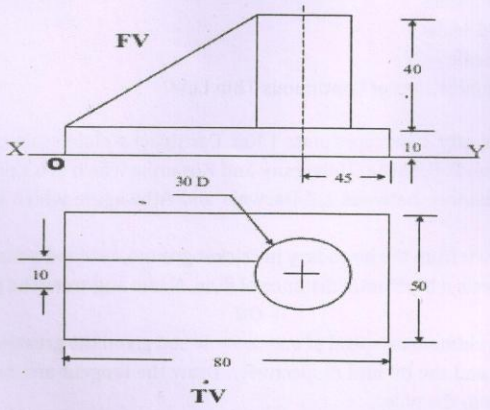
25.11.2022, Friday **Time: 1:00 p.m. To 3:30 p.m.** **Maximum Marks: 60**

Instructions:
1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

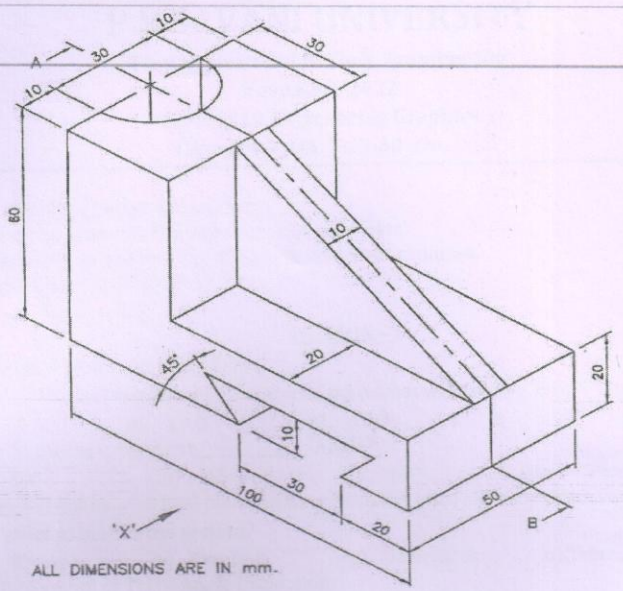
SECTION – I

Q - 1	**Answer the Following. (Any Five)**	**[05]**	**CO**	**BTL**
(i)	In a scale 4 cm line represents 12 mm, and then what will be its R.F.? a) 2:15 b) 15:2 c) 10:3 d) 3:10		**1**	**3**
(ii)	Hatching Lines are drawn at _____ Angle? a) 30^0 b) 45^0 c) 60^0 d) 75^0		**1**	**1**
(iii)	If the cone is cut by a vertical plane passing from the centre of cone then what shape will be created in its cross section? a) Ellipse b) Parabola c) Hyperbola d) Triangle		**1**	**3**
(iv)	Draw the Symbol of Third Angle Projection.		**1**	**1**
(v)	If the line is parallel to HP and perpendicular to VP then what will be its Elevation? a) Line with True Length b) Line with Reduced Length c) Point d) None of these		**4**	**2**
(vi)	Which scale is used to draw Building Drawing on paper? a) Plain Scale b) Enlarged Scale c) Reduced Scale d) Actual Scale		**1**	**2**
(vii)	What are the applications of Continuous Thin Line?		**1**	**1**
Q - 2 (a)	On map of Surat city 1 cm represents 1 Km. Construct a plain scale to measure the distance between P. P. Savani University and Kosamba which is 6 Km. Also indicate on scale, the distance between Lal Darwaja and Athwagate which is 3 Km and 7 hectometers.	**[05]**	**2**	**6**
Q - 2 (b)	A ball was thrown from the boundary in cricket ground, reached a maximum height of 50m and travels a horizontal distance of 80m. Name and trace the path of ball.	**[05]**	**3**	**6**
	OR			
Q - 2 (b)	Construct an Archimedean spiral of one convolution given the greatest and shortest radii as 84mm and the 00 mm respectively. Draw the tangent and normal at point 6o mm away from the pole.	**[05]**	**3**	**6**
Q - 3 (a)	Draw the projections of the following points on the same x-y line : i. Point A is 10 mm above the HP and 10 mm behind the VP. ii. Point B is 30 mm above HP and 15 in front of VP. iii. Point C is 20 mm below HP and 30 mm behind VP. iv. Point D is on HP and VP. v. Point E is 15 mm below HP and 10 mm in front of VP.	**[05]**	**4**	**3**

Q - 3 (b)	A line PQ, 80 mm long has its end P 15 mm above the HP. Line makes an angle of 30° with HP and 45° with the VP. End Q of the line is 10 mm in front of VP. Draw the projections the line considering it in first quadrant.	[07]	6	3
	OR			
Q - 3 (b)	A line CD has its end C 15 mm above HP and 10 mm in front of VP. The end D is 60mm above HP. The distance between the end projectors is 50 mm. The line is inclined to HP by 25º. Draw the projections and find the inclination with the VP and the true length of the line CD.	[07]	6	3
Q - 4	**Attempt any one.**	[08]		
(i)	A regular pentagonal plate, 50mm side, is resting on one of its corner in the HP. The diagonal through that corner is inclined at 40° to the HP and the plan of that diagonal inclined to VP by 30°.		4	3
(ii)	An isosceles triangular plate of 50 mm base and 75 mm altitude appears as an equilateral triangle of 50 mm in top view. Draw the projections of a plate, if its 50 mm long edge is on HP and inclined at 45° to VP.		4	3
	SECTION – II			
Q - 1	**Attempt any one.**	[10]		
(i)	A cone, diameter of base 60mm and height 80mm has one of its generators in HP and making an angle of 45° with VP. Draw the projections of the cone.		4	4
(ii)	A pentagonal pyramid, side of base 40 mm and height 80 mm, is resting on H.P. on its base with one of the edges of the base away from V.P. is parallel to V.P. It is cut by an A.I.P. bisecting the axis, the distance of the section plane from the apex being 20 mm. Draw the elevation and sectional plan of the pyramid and draw the true shape of the section. Find the inclination of the section plane with the H.P.		4	4
Q - 2	Draw the Isometric Drawing of the following object.	[10]	4	4



Q - 3	Draw the (i) Front view (ii) Top view and (iii) Right hand side view of the given object in first angle projection method.	[10]	4	4



****

CO : Course Outcome Number BTL : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create