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Code No. : 12037

**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**  
**B.E. (CBCS) II-Semester Main Examinations, January-2021**

**Engineering Drawing**  
(Common to EEE & ECE)

Time: 2 hours

Max. Marks: 60

*Note: Answer any NINE questions from Part-A and any THREE from Part-B*  
**Part-A (9 × 2 = 18 Marks)**

Q. No.	Stem of the question	M	L	CO	PO
1.	What is Lettering?	2	1	1	1
2.	Explain the use of Centre line and hatched line in Engineering Drawing.	2	2	1	1
3.	Why second and fourth angle projections are not followed in the projections?	2	2	2	1
4.	State Front view and Top view positions in First and Third angle projections.	2	1	2	1
5.	Define Regular polyhedra with two examples.	2	1	3	1
6.	What is meant by truncated solid?	2	1	3	1
7.	What is the purpose of sectioning of solid?	2	2	4	1
8.	What are the uses of Development of surfaces?	2	1	4	1
9.	Draw a Isometric view of triangle of side 30mm.	2	2	5	1
10.	Differentiate between isometric view and isometric projection.	2	1	5	1
11.	What is the necessity of Engineering drawing for Engineers.	2	1	1	1
12.	Name the systems of projections which are in vogue.	2	1	2	1
<b>Part-B (3 × 14 = 42 Marks)</b>					
13. a)	Construct an ellipse given the distance of the focus from the directrix as 60 mm and eccentricity as 2/3. Also draw tangent and normal to the curve at a point on it 20 mm above the major axis.	8	2	1	1
b)	Construct a regular pentagon of 25 mm side.	6	2	1	1
14. a)	The top view of a 75 mm long line AB measures 65 mm, while the length of its Front view is 50mm . Its one end A is 10mm above H.P. and 20mm in front of V.P.*Draw the projections of line AB.	7	3	2	1
b)	Draw the projections of a circle of 40mm diameter, having its plane vertical and inclined at 30° to the V.P. Its centre is 30mm above the H.P. and 20mm in front of the V.P.	7	2	2	1

Contd... 2



15. a)	Draw the top and front views of a cube of 40 mm side resting its one of its square faces on H.P. such that one of its vertical faces is parallel to and 10 mm in front of V.P.	6	3	3	1
b)	A pentagonal pyramid, base 25mm side and axis 50mm long has one of its triangular faces in the V.P. Draw its projections.	8	2	3	1
16. a)	A cylinder of base diameter 40 mm and height 90 mm rests on its base on HP. It is cut by a Plane perpendicular to VP and inclined at 45° to HP. The cutting plane meets the axis at a distance of 35 mm from the top base. Draw the sectional plan and true shape of section	7	3	4	1
b)	A pentagonal prism of base side 30 mm and height 60 mm is cut by a plane perpendicular to VP and 50° to HP and passing through the axis at a height of 35mm above the base. Draw the development of the lower portion of the solid.	7	2	4	1
17. a)	Define Isometric scale, Isometric axis, Isometric plane and Isometric view	4	1	5	1
b)	A sphere of 30mm diameter centrally resting on a frustum of a cone of top and bottom diameters 30mm and 50mm with height 60mm. Draw the isometric view of the composite solid.	10	3	5	1
18. a)	The vertex of a hyperbola is 50mm from its focus. Draw the curve if the eccentricity is 3/2. Draw a normal and a tangent at a point on the curve, 60mm from the directrix.	8	3	1	1
b)	Two points A and B are in the H.P. The point A is 30mm in front of the V.P. while B is behind the V.P. The distance between their projectors is 75mm and the line joining their top views makes an angle of 45° with XY. Find the distance of the point B from the V.P.	6	4	2	1
19.	Answer any <i>two</i> of the following:				
a)	Draw the projections of a cone, with a 50 mm base diameter and a 70 mm long axis that is resting on a point of its base circle on the ground such that its axis is inclined at 30° to the H.P	7	3	3	1
b)	Draw the development of the cube of side 40 mm resting on its face with all the edges equally inclined to VP, which is cut by a plane inclined at 30° to HP and perpendicular to VP. The cutting plane passes through the cube at the top left corner of the cube.	7	2	4	1
c)	Draw the isometric projection of a cylinder of base 50 mm diameter and 70mm height when it rests with its base on H.P.	7	2	5	1

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	60
2	Knowledge on application and analysis (Level-3 & 4)	40
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	0